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A Clinical Lecture
ON
THE NATURE AND TREATMENT OF PILES.

Delivered at University College Hospital on Feb. 27th, 1907,

BY ARTHUR E. J. BARKER, F.R.C.S.ENG.,
PROFESSOR OF SURGERY AT UNIVERSITY COLLEGE HOSPITAL SCHOOL AND SURGEON TO THE HOSPITAL.

GENTLEMEN,—A number of cases of piles having recently been under my care in the wards and outside the hospital has suggested that the subject of the nature and treatment of hæmorrhoids would be a suitable one for a practical clinical lecture while the cases you have seen are fresh in your memories.

But first, what is a pile? This question is not a difficult one to answer. A pile is primarily a dilated or varicose condition of one or more of the plexus of veins lying under the mucous membrane of the last inch or so of the lower bowel. Probably there is a congenital weakness of the muscular coat of these veins in most cases, just as we find the same thing in the case of the veins of the leg. If we inquire of patients suffering from hæmorrhoids we constantly hear that their parents were similarly afflicted or other members of the same family and a considerable number of them have developed the trouble early in life. But this is not all. There are other factors in the production of piles. These divide themselves into two groups: first, any cause of obstruction to the return of blood through the inferior hæmorrhoidal plexus; and, secondly, any cause of local irritation. In the first group come a sluggish liver with engorgement of all the veins of the portal system, heart disease, pregnancy, and ovarian cysts and other pelvic tumours, and, most common of all, a loaded bowel in chronic constipation, and prolonged standing or sitting. In the second come every kind of septic irritation, the commonest being want of cleanliness after defæcation; then local mechanical irritation, such as chafing, bumping on rough roads, sitting on damp seats, &c.

It is easy to understand how the factors in the first group act upon veins congenitally weaker walled than usual. They become simply more and more distended as their weak walls yield to the strain from above. But at first sight it is not quite so easy to explain how local irritation plays a part in their production. And yet a little thought makes the matter plain. Local irritation prolonged for any time leads to hyperæmia and in the end to inflammation of a chronic type, with gradual loss of tone in the walls of the vessels in the inflamed area and their gradual dilatation by the stress from within. This inflammation has also other effects. It may lead to clotting in the veins, with or without suppuration, and it may cause chronic thickening in the tissues around which may become permanent. Piles formed in any of these ways, alone or combined, only exist in the lowest part of the rectum in or about the anus—the "pile-bearing area" of Whitehead. They may come to lie quite internal to the anal sphincter or external to it, or sometimes one, sometimes the other, when they are called intermediate. They may be spongy owing to great vascularity, or hard from periphlebitis, or clotted and inflamed from a more acute inflammation.

As a rule most patients who consult us for piles have been suffering from them for a long time. A variety of causes have been at work but most usually perhaps want of cleanliness and lack of attention to the emptying of the bowels. But as a rule they only come to us surgeons at a time when they think that nothing but an operation will relieve them. And this brings us to the question of treatment.

Now the first point I want you to understand is this, that many cases of piles even when very large do not require operation for their cure. Of course, some are beyond the reach of any other treatment short of operation. Again, you will do well to remember that many cases of very large piles which will ultimately require operation are not when you first see them in a safe state for operative treatment. By this is meant that in many cases as they come to you there is much septic irritation about the anus and rectum from want of cleanliness. On the one hand, this is keeping up congestion and dilatation of the veins, and on the other any operation undertaken at this time would be attended with risk from dislodgement of clots and further would not be followed by that union without suppuration which is necessary if contraction of the anus is to be avoided. These points cannot be insisted on too much or too frequently.

The first thing, then, in any case of piles is to see that they are relieved from any source of engorgement from within by gentle laxatives and bodily exercise and that the local condition be patiently treated on antiseptic principles. The piles and surrounding parts should be washed over three times daily, while the patient brings them into prominence by straining. The first washing should be done with soap and water and it may be said of this that if it were employed night and morning by those who suffer from pruritus and a slight tendency to hæmorrhoids there would be far fewer cases which needed operation. Not only is this treatment preventive of piles but when they are undoubtedly present they will become much smaller and even disappear when it is carried out patiently and regularly. But when piles are present in abundance and covered by irritating mucous discharge as a rule antiseptics are used with advantage if not too powerful. Perhaps the best of all is bichloride of mercury, 1 part in 1000; at least, I have found it so. After the first washing of the piles with soap and water they are gently bathed with this lotion by means of a piece of gauze, old linen, or wool steeped in lotion. If possible they should then be reduced within the anus but without force, and the patient should where convenient lie down for a little time afterwards. This should be done in the morning after the bowels have been relieved and at night before going to bed. It is surprising what improvement will take place even in very bad cases under this treatment. Over and over again I have seen large crops of piles disappear completely and patients who were miserable before and who had made up their minds to operation have been able to postpone the latter indefinitely. But even suppose that hæmorrhoids are not quite cured in this way the improvement in their condition under this treatment is usually so great that when an operation comes to be done the prospects of its success are much improved. Indeed, wherever practicable I have always insisted that this treatment should precede any operative undertaking. It must not be forgotten that any inflammatory condition round a vein in any part of the body is not devoid of risk. Such conditions not infrequently are followed by thrombosis and embolism with all their well-known dangers. And in the neighbourhood of the anus, where such a thrombosis is almost sure to become septic, this danger must always be kept in mind and all rough handling of an inflamed pile be avoided. But besides this danger there is also that of operation on an area in which inflamed veins lie. Not only is there very little prospect of satisfactory union of a wound where such a condition exists but there is also the danger of dislodging septic thrombi and also septic absorption from the wound. In all cases, therefore, you will do well to wait until such treatment as that just described has brought about a subsidence of all inflammation before any operation on this region is attempted. The only exception to this rule is, perhaps, that of the single suppurating external pile which after being carefully cleansed with antiseptics may be slit across in the long axis of the bowel and its contents evacuated just as an abscess would be emptied elsewhere. But this should be done with care and by no means treated lightly.

How are we now going to deal with well-marked piles which have resisted the treatment indicated above? In the first place, we will suppose the case of a single large one protruding from the margin of the anus. The older method of simply tying a ligature round its base and allowing it to slough off may be rejected at once as painful and not without risk as the separation of the strangled mass cannot take place without septic suppuration which, for reasons given, is dangerous. Of course, the base of the pile can be clamped in the long axis of the bowel and burned through with a cautery knife. This gives an aseptic surface to begin with, but one which is sure to be fouled later, and when it granulates up there may be more contraction of the anus at the spot than is comfortable, although, as the line of shrinking is in the long axis of the bowel, it is not as a rule excessive. But the best mode of dealing with a solitary pile where the rest of the anus is healthy is based on the conclusion that with great care a wound in this region can be induced to heal by first intention as

perfectly as in any other part of the body. There is a general belief that because this is the channel by which the system is relieved of its solid impurities it cannot be expected that wounds in or about the anus can heal as aseptic wounds in other parts do. But this is not so. It is all a question of preliminary treatment. And here again some old traditions still exist. The practice hitherto in preparing a patient for a pile operation has often been to give a dose of some strong laxative, such as castor oil, the day before operation and an enema a few hours before. The consequence of this practice is too often that at the moment of relaxation of the anus by the anæsthetic or in the course of the operation a quantity of loose motion is discharged which seriously imperils the chances of primary union. This is a wrong course to pursue as to the time of preparation. When we wish thoroughly to clear out the bowel we should begin much earlier. The laxative should be given three or four days before operation for two days in succession, assisted if necessary by enemata or as often as is found indispensable to unload the colon and secure liquid motions free of old stagnant fæces. After this the bowels should be left in a state of rest for at least 24 hours before operation. By these measures we secure an empty bowel free of mucus and less engorged with blood than if it were in a state of action. It can consequently be cleansed and remain clean during the operation.

Another point which is essential for a proper control of the anus during operation is that it should be perfectly relaxed. This is to a certain extent secured by the general anæsthesia employed but not adequately. For this reason it is well in all cases to stretch the sphincter with the thumbs. First one thumb is inserted into the anus, then the other alongside of the first, and then with the fingers spread out on the nates on both sides by making the movement of closing the hands the thumbs are separated slowly and steadily from one another and the sphincter is thus steadily stretched without any sudden pull which might overdo the distension. If spinal analgesia is employed this stretching is unnecessary, as the sphincter is thoroughly relaxed, with loss of sensation at the same time. In either case the pile or piles project with the mucous membrane of the bowel and all the parts around can be cleansed with antiseptics and finally by a flush of sterile saline solution. But before the operation is begun it is well to stuff the rectum with a wisp of sterile gauze to prevent any mucus or motion from coming down during the procedure. To remove a single pile under these conditions is now easy. It is simply drawn forward with suitable pile forceps and its base is included between two elliptical incisions in the long axis of the bowel. These incisions should only divide the mucous membrane and define the root in which run the vessels. This root is now surrounded with a fine thread and tied tightly and the pile is snipped off with a scissors outside the ligature. The mucous membrane is then closed over the stump and the whole area is dusted with iodoform. After this, and only after the dusting, the wisp of gauze is removed from the rectum. Then a pad of iodoform gauze secured by a T bandage is placed over the anus. Such an operation ought to be, and is, followed by primary union if done cleanly, and there is not the least damage to the functions of the anus.

But there are other cases in which the whole of the inferior hæmorrhoidal plexus is involved and there is a more or less complete ring of piles round the anus. Here we may proceed if we like upon the same lines as above and remove each pile separately. But if we do so we must be prepared to find that the amount of mucous membrane is somewhat too little to cover all the stumps and there is some risk of contraction of the anus if we have granulating surfaces left. For my own part, I believe that in such cases there is no better operation than that known as Whitehead's. But then it must be done on the lines which were so well laid down by this surgeon many years ago. The objections which have been raised to it from time to time are based upon conclusions from operations which in many cases have been done without due regard to the principles laid down by the originator of the operation. Whitehead started from the fact that in a case where the anus was encircled by a ring of piles the whole practically of that part of the inferior hæmorrhoidal plexus lying within an inch or so of the margin of the anus was involved in the varicose condition. From this he argued that no operation could be considered complete which did not remove the whole of this plexus. By the removal of this not only would the condition present be removed but also the chance of any return of piles, inasmuch as the plexus from which they always spring had been completely taken away. To effect this he proceeded as follows: after the bowel had been unloaded as above described and cleansed by thorough washing, in order to gain complete access to the "pile-bearing" area the sphincter ani was first stretched as above described until quite relaxed. The consequence of this should be, and is if rightly done, that there is a prolapse of the mucous membrane of the lower inch of the rectum. When this has again been thoroughly cleansed the forefinger of the left hand is inserted into the anus and between it and the thumb the anterior part of the prolapse is drawn down. Then at a point in front where the purple skin of the anus proper merges into the skin around a short transverse slit is made between the two with curved scissors at the most anterior part of the anus. Into this slit the blunt point of the scissors is inserted under the skin and forced outwards first on one side and then on the other until about half an inch has been undermined. This is then evenly cut away and the scissors are thrust again under a fresh portion of skin which is similarly cut until the whole circumference of the purple skin has been separated from the true skin around the anus. If the right depth has been cut off this is quite easy and is only followed by very trifling bleeding. Holding the ring of piles now separated from the skin of the anus in a series of pile forceps and drawing gently on the whole tube of mucous membrane it is now easy with an elevator, or, better still, with closed blunt-ended scissors, to push back, as it were, the external sphincter ani, which is well seen, until all round the anus it is separated from the tube of mucous membrane for about one inch. This tube, containing all the piles and "pile-bearing" area, consists not alone of mucous membrane but of submucous tissue, veins, and a thicker layer of condensed fibrous tissue which separates it from the external sphincter. If the stripping takes place accurately between it and the sphincter, as should always be the case, it is particularly easy and very little blood is lost. If the beginner dissects in the muscle on the one hand, or among the veins on the other, there is much oozing, but a little experience will enable the surgeon to work at the proper depth.

The tube of pile-bearing area being now drawn down for about an inch to one and a half inches is snipped through for about half an inch transversely at a point at which when lifted up the divided edge reaches to the cut skin. The edge so produced is stitched to the corresponding edge of the skin accurately, any vessel which may have been divided being included in the ligature. It is not worth while to stop to tie it separately. In placing these stitches and all those which follow them it is well to include a good depth of mucous and the sub-mucous tissues to obtain a good hold for the threads. When all is secure here further snips are successively made, continuing the first on both sides transversely from before backwards. But as each is made the cut tube is stitched to the skin at once as before previously to making the next snip. In this way hæmorrhage is avoided and the tube is cut away more evenly at the same level and when the last few snips only remain we see the new anal margin almost completed with little or no bleeding. The last transverse snip and attachment of the cut edge to the skin posteriorly finish the procedure, an entire ring of piles having been taken away with the plexus of veins to which they belonged. The appearance of the anus is then nearly normal. The healthy mucous membrane brought down from above is seen attached evenly to the skin of the margin over the sphincter which has not been injured in any way. As the sphincter will remain weak after having been stretched usually for some days the mucous membrane is more evident for that time, but as the muscle recovers power it is drawn inwards to its usual height unless too much skin externally has been removed, when it forms a moist ring for some time after healing has been completed. But this is only a transient condition, the mucous membrane external to the opening of the anus being before long hardened into the same texture as the original marginal skin of the opening and ceasing to secrete.

When the stitching has been completed the parts are dusted with iodoform, the gauze plug is removed from the rectum and a morphine suppository is introduced. A pad of gauze over the anus is all that is now needed. The after-treatment consists in keeping the part clean with a little boric lotion daily or, better, 1 to 1000 bichloride solution, followed by dusting with iodoform. The fine stitches may

be left to themselves. They include but a small amount of tissue and are tied in the long axis of the rectum and cut their way out without any trouble. On or about the sixth day an oil enema is given and allowed to remain as long as possible. If it comes away after a few hours it brings away softened fæces. If not a soap-and-water enema is given on the next day. After each motion the anus is washed and dusted as before.

Objections have been raised to this operation here and there but to me they seem groundless. It is urged that there is a risk of suppuration round the stitched ring and consequent contraction. This I can honestly say I have never yet seen, though I have operated in many scores if not hundreds of cases by this method. The objection arises in the minds of those who can hardly believe in an aseptic operation about the anus. But with proper preparation this can be easily accomplished. And during the operation if the dissection is carried out with clean boiled instruments rather than with the fingers there is no reason why the wounded surfaces should not remain aseptic. As a matter of fact, which some of you can vouch for as having seen these cases, the healing is faultless. Another objection which is raised is that the mucous membrane remains moist and painful if it projects over the edge of the anus. If it does project it is due to the fact that too much of the true skin has been removed and the mucous membrane has had to be drawn out to meet it. It is easy to avoid this in the first place, but if it is after healing too low down it is soon converted into normal marginal tissue and gives little trouble in the meantime if washed twice daily with the bichloride solution.

Of all the various operations which I have done or seen done this particular one recommends itself to me above all in cases of advanced piles. And among the very large number of patients I have operated upon in hospital and private none have been dissatisfied with the result. But from the way it is described in some standard works it is plain that the principles and details of Mr. Whitehead have not been clearly appreciated and that operations have been wrongly done. One great merit it certainly has which is not possessed by other methods—i.e., that all tendency to future piles is prevented.

A Clinical Lecture
ON
THE TREATMENT OF HYSTERIA.

Delivered at the West End Hospital for Diseases of the Nervous System,

BY THOMAS D. SAVILL, M.D. LOND.,
PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—The rational treatment of hysteria must depend upon the application of the principles of pathology and etiology. These I have already discussed on several occasions.[1] Many authors regard hysteria as a psychosis pure and simple and most authors regard its essence as a psychosis which is attended by physical manifestations. I cannot entirely agree with either of these views. Undoubtedly emotional instability is a characteristic of hysterical subjects, but this is only a part, the mental part, of a more widespread instability. A prolonged study of the disorder under somewhat exceptional opportunities has led me to conclude (1) that hysteria consists of an instability or undue irritability of all the nervous and reflex centres throughout the body, and particularly those of the vaso-motor and sympathetic systems; (2) that hysterical paralysis or tremor and many other hysterical phenomena hitherto unexplained are produced by vascular changes in the nervous system or elsewhere; and (3) that the essential defect in the nervous system upon which hysteria depends, whatever it may be, is inborn and inherent—that is to say, the reflex centres in hysterical subjects are throughout life more unstable than those of other people. Many intercurrent or accidental causes have been recognised of late years as capable of determining hysterical manifestations—causes which do not determine hysterical outbreaks in non-hysterical people simply because the reflex centres of the latter are more stable—such as fear, grief, religious exercises, shocks, injuries, all debilitating conditions, pregnancy, parturition, sexual excess, overwork, worry, anæmia, various acute and chronic intoxications such as alcohol, syphilis, lead, rheumatism, diabetes, typhoid fever, influenza, and other specific fevers.[2] There are other causes, not so well recognised, to which I shall direct your attention to-day.

The remarks I have to make on the treatment of hysteria will come under five headings—(*a*) certain general measures directed to improve the tone and nutrition of the nervous system and to allay its irritability; (*b*) other symptomatic treatment, mainly by the aid of drugs; (*c*) etiological treatment which depends on the discovery and eradication of the determining cause of the hysterical manifestation in operation; (*d*) the use of vaso-constrictors, vaso-dilators, and blood remedies; and (*e*) educational and other preventive measures.

(*a*) The general measures directed to the improvement of the nervous irritability may consist of rest, isolation from home surroundings, food, massage, electricity, hydrotherapy, and psychotherapy or hypnotism.

1. Of all methods of treatment rest is of the greatest value in allaying any irritability of the nervous system—rest of mind and rest of body. All sources of peripheral irritation must be removed from the body and all sources of worry or anxiety from the mind. Subjects demanding the smallest exercise of the judgment must be excluded. Complete rest of the body can only be obtained in bed, and the patient should not be allowed to sit up or to take any movement that can be avoided. A method of treatment involving complete rest has been carefully elaborated by Mrs. William Archer. The patient is gradually educated to relax completely all the muscles and to direct the mental attention to the relaxation of the muscles, practices which are much more difficult than would at first sight appear. Abundance of sleep is indispensable to hysterical patients, whether as a preventive or remedial agent, and it is sometimes justifiable to administer hypnotic remedies under due precautions.

2. Removal from the conditions under which the disease arose is almost as important as rest, for it not only relieves the patients at once from the worries incidental to their surroundings but it attracts their attention into new channels and away from their disorder. To establish complete isolation of the patient from her previous surroundings it is necessary in many cases not only to remove the patients from home but to forbid any letters to be written or received and to prohibit all visitors or communications with friends. A difficulty often arises in this connexion with the friends and relations who wish to continue their sympathetic manifestations and may not like to surrender the charge of the patient into the hands of strangers. It may, however, be diplomatically explained to them that this is done not from any doubt about the value of their ministrations but simply to place the patient under conditions which differ from those under which the disorder arose. A daily report of the progress can be sent by the nurse or medical attendant.

3. As much easily assimilable food as the patient can take improves the nutrition of the nervous system and of the body generally, and in order to increase the power of assimilation this increased quantity of food may be associated with (4) general massage. The combination of these four measures—rest, isolation, abundance of food, and massage—constitute the system of treatment first adopted by the late Professor J. M. Charcot at the Salpêtrière and afterwards known as the Weir-Mitchell treatment. The details of this treatment are too well known to need description. General massage is given daily with a double object—to soothe the nervous system (by the stroking movements) and to promote the tissue changes and the nutrition of the body (by kneading and other movements). Tapotement is a procedure I do not recommend. Half an hour of massage may be gradually increased to one hour twice daily. The patient should have a glass of warm milk and be instructed not to speak or move a muscle for an hour after each sitting. As a rule no drugs should be given except an occasional aperient or dose of bromide for sleeplessness.

It is not every case of hysteria which is suitable for treatment by the Charcot-Weir-Mitchell methods, and these should never be adopted until skilled medical advice has been obtained, and only when they can be carried out under skilled medical supervision. Without these conditions serious

[1] THE LANCET, July 20th, 1901, p. 119, and Jan. 30th, 1904, p. 273; Clinical Journal, Dec. 1st, 1897, May 25th and June 1st, 1904.

[2] Georges Guinon: Les Agents Provocateurs de l'Hysterie. Delahaye et Lecrosnier, Paris, 1889.

harm may result to the patient and discredit be brought upon a valuable means of treatment. It is important to satisfy oneself by a very thorough examination as to the absence of all organic disease and that no toxic, septic, or organic cause is in operation; it is also of importance that the digestive organs should be in good order. The most suitable cases are: (1) those where the nutrition is below par; (2) those which are purely of nervous origin; and (3) those in which there is considerable irritability of the neuro-muscular system, as evidenced by twitchings and increase of the superficial and deep muscular reflexes. Persistent gloom and despondency are relatively rare in hysteria (excepting in the male), but such cases are wholly unsuitable for this treatment, and I have seen considerable harm done thereby. Cases presenting mental aberration of any kind require considerable caution.

It is not always necessary to employ all these methods. The case of a young married woman, whom I recently saw with Mr. R. Mortimer Johnson of Balham, illustrates the value of rest alone. She was suffering from hysterical hip-joint disease and after about one month's treatment of complete rest she has recovered. Moreover, the four measures named may be combined in varying proportions.

Here is a patient who illustrates the value of rest, isolation, abundant food, and systematised exercises.

CASE 1.—A girl, aged 17 years, came to the hospital as an out-patient under Dr. E. D. Macnamara, who has kindly allowed me to show the case, in June, 1906, for her third attack of aphonia, each of the attacks having come on suddenly and having been promptly cured by the application of faradism to the larynx. There is a long history of various hysterical manifestations, and for the last two years she has been losing the use first of one limb, then of another. She was brought again on Oct. 3rd for an attack of clonic spasms and weakness chiefly in the right arm, right leg, and left side of the face, which had come on quite suddenly in church a few days previously. The spasms were of considerable violence, and though they were choreiform in character they were somewhat more rhythmical than the chorea of Sydenham. She was at once placed in hospital under a treatment of rest, isolation from her relatives, and abundance of milk (without massage) and you will see now at the end of four weeks that she is perfectly well. There are no movements, no paralysis, and she has gained in weight. Latterly she has had systematised educational movements of the affected limbs, which is a measure I have found of great use in hysterical muscular affections.

5. Electricity is of considerable use, especially in cases which do not need, or cannot undertake, the more exacting forms of treatment just referred to. Galvanic and faradic current electricity is, I believe, very useful for hysterical affections of the voluntary muscles. The constant current is more useful for rigidities, the faradic for paralytic conditions, and you will remember how promptly this last-named form of electricity cured the aphonia in the case you have just seen. Static electricity seems to me to combine three effects. It undoubtedly produces a psychic effect upon the patient; it also seems to improve their general tone; and lastly, it appears to be of special value in cases of anæsthesia when used by the method of sparking. The case of hystero-traumatic paralysis to which I have previously referred[3] was an illustration of this. After three applications of static sparks to the arm which had been completely paralysed and anæsthetic for two months the anæsthesia immediately diminished in area, and after a few more sittings entirely disappeared. The most modern form of electricity in medicine is the high-frequency current and I have used it extensively in various nervous affections. It has appeared to me to do a great deal of good in some cases of hysteria, but the results have been too uncertain and too much confused by other and associated methods of treatment for me to speak with absolute certainty about the value of this form of electricity. It undoubtedly acts as a general tonic, probably by its effects upon the involuntary muscular tissue, more especially of the arteries, both in hysterical and other cases.

6. Hydrotherapy was extensively used by Charcot and others in France in former times with good result, but it has not been much employed in England. Undoubtedly cold or hot water applied to the surface of the body either by douches or baths acts powerfully on the neuro-vascular system and I have seen cases where the shock of a cold douche has not only acted as a powerful tonic but has involved the disappearance of hysterical manifestations. A previous attack in the patient you have seen to-day was suddenly cured by a wet pack. I have seen other cases where the efficacy of hot baths in calming an excited nervous system was very apparent; cases of muscular spasm are generally more amenable to heat than to cold.

7. Under psychotherapy may be included all kinds of persuasion, suggestion (auto- and hetero-) and hypnotism. These methods are not only useful in the slighter cases of uncomplicated hysteria but they sometimes form valuable adjuncts to the other methods just mentioned. It is here where the influence of the physician's personality or character over his patient and the confidence of the latter in the former play a leading rôle. The object of psychotherapy is to cultivate the will and the control of the patient over her unruly emotions and unstable reflex centres. She must be encouraged by firm but gentle methods in the belief that her excitement, paralysis, attacks or what not, can in some degree be controlled, and that each victory, however momentary, leads her to fresh victories hereafter. In the case of paralysis the patient may be taught to realise that the lost movements, or more correctly the ideo-motor centres, can be re-educated. I remember one male patient with a paralysed arm whom I induced to practise daily with a dynamometer, which he watched as it recorded the daily increasing indications of his returning strength. Another patient, a woman with paraplegia, I induced to take a step or two every two hours, and to interest herself in her rapidly improving power of walking.

Hypnotism, throwing a person into an artificial sleep in which he or she is susceptible of suggestion from others, undoubtedly finds a place in the treatment of hysteria, but unfortunately a good many hysterical patients are not hypnotisable. Auto-suggestion, the persuasion of self that one is really almost or quite well, is also of great value. The influence of a person's mind over his body has been recognised in our profession almost from time immemorial and those interested in the subject should read the treatise of the late Dr. Hack Tuke.[4] By suggesting to herself with sufficient force and sufficient frequency that she *is* well and free from pain, a patient may *become* well by the influence of the will over the bodily sensations—in the absence of serious organic disease. This principle forms the basis of several of the modern "cults" or "religions."[5] The potency of the will over the bodily sensations is beyond dispute and, with certain reservations to be mentioned shortly, is a valuable agent in the treatment of hysteria.

(*b*) Other symptomatic treatment mainly with the aid of drugs. First in regard to sedatives. The bromides still remain our sheet anchor for allaying the irritability of the reflex centres, and I prefer ammonium bromide to the other halogen salts. In my experience it may be given for a considerable time, even for years, without any detrimental effect, though it may have the disadvantage of hiding some curable causal condition upon which the hysterical manifestation depends. If the patient complains that she "lives on bromide and cannot do without it," this indicates that some chronic irritation is going on which must be removed. Opium and all its alkaloids are, as a rule, prohibited, not only for fear of the habit but because they do not invariably act as sedatives to these subjects, and because during the reaction phase the patient is generally worse than ever. Apomorphine hypodermically is, however, the most valuable remedy we have for the prompt cure of severe and recurrent hysterical convulsions; it produces copious emesis and the storm clears up like magic. Alcoholic stimulants are forbidden, partly because of the habit so easily engendered, but chiefly, at least in my experience, because alcohol is of itself capable of acting as a determining cause for hysterical storms. Valerian and asafœtida are still the most valuable stimulants we possess for the faintings, prostration, or collapse. The taste of these drugs is not as unpleasant as their odour, which may be partially counteracted by holding the nose while swallowing the medicine. Many attempts have been made to make these drugs more palatable and a partial success has been obtained in borneol isovalerianate.

(*c*) Without detracting from the foregoing methods of

[3] The Clinical Journal, June 1st, 1904, p. 103.

[4] Illustrations of the Influence of the Mind upon the Body, J. and A. Churchill, London, 1884.

[5] See also a chapter on Healthy Mindedness in "Varieties of Religious Experiences," by Professor William James.

treatment which have been in vogue for a number of years there are others which have not yet been sufficiently recognised but which are of equal if not greater importance. The foregoing methods treat the disordered nervous system only; they are more or less empirical. Those to which I now propose to refer depend upon a careful study of the accidental or determining causes of a hysterical manifestation and are based on a thorough investigation of the physiological functions of hysterical patients from the point of view of general medicine and pathology. Having come to the conclusion that the chief seat of the reflex instability lay in the sympathetic vaso-motor systems, it occurred to me that nothing would be more likely to influence these centres than the condition of the blood. I therefore determined to look out for, and if possible correct, any derangement of metabolism, blood alteration, or constitutional disorder which might be in operation. And in confirmation of the view that blood alterations of this kind may determine hysterical outbreaks I have found that quite a considerable number of hysterical patients exhibit dermatographia, erythematous mottling, pruritus, twitchings of the limbs at night, general neuro-muscular irritability, or other symptoms suggestive of toxæmia. Moreover, I have also seen several cases where the hysterical paroxysms have been associated with paroxysms of urticaria, an undoubted toxo-angio-neurosis. Here, for instance, is one of these.

CASE 2.—A female, aged 20 years, came to the out-patient department in June, 1905, for curious nervous attacks in which she lost all control over herself and behaved like a mad woman. These began with a feeling of fulness of the head which spread over the body and limbs, after which she "did strange things," and finally became completely collapsed. During these attacks the skin became very red. They were followed by "nettle-rash," which lasted a day or two after. Pressure in the right ovarian region produced the epigastric aura and the commencement of an attack in which one could see the flushing of the skin. Her teeth and digestion were very defective and I prescribed cascara, arsenic, bromide, and alkaline carbonates. She has improved considerably but still gets attacks in which both the nervous and the skin symptoms are less severe. Please notice that the nervous paroxysms and the skin symptoms appeared and disappeared together.

Here are some of the blood conditions (toxæmias) which may be in operation:—

1. It has long been known that various microbic toxins may act as determining causes of hysterical manifestations—such toxins as phthisis, syphilis, typhoid fever, scarlet fever, acute articular rheumatism, pneumonia, &c.[6]

2. It has also been recognised that alcohol, lead, mercury, sulphide of carbon, and other metallic and organic poisons may act similarly.[7]

3. Anæmia is very frequently met with in hysterical girls and when this is remedied the nervous symptoms sometimes cease. Here, for instance, is a girl, aged 20 years, who came to me three months ago suffering from troublesome hysterical attacks. She has been continuously treated by iron and the attacks have quite ceased, though all the other conditions and her home surroundings have remained the same. It is interesting to note that Professor H. Oppenheim,[8] who regards hysteria as a psychosis, points out as a fallacy in the diagnosis of anæmia in hysterical subjects that "the pallor of nervous individuals is not always a sign of anæmia but may be due to vascular spasm"—a statement which I can fully endorse.

4. Various debilitating conditions due to bad or insufficient air or food, with consequent alterations in the blood and the nutrition of the body, are also known to be conditions which may determine hysterical symptoms. And it may be practically useful to advise subjects liable to hysterical or nervous manifestations to keep records of their weight and to consult their medical man when this is falling.

5. All the foregoing are now matters of common knowledge, but it is not yet recognised what an important part gastro-intestinal derangements may play in the production of hysterical manifestations quite apart from debility or loss of weight. I am able to show you several illustrations of this.

CASE 3.—A young woman, aged 19 years, came to me in March, 1905, presenting a generalised rhythmical intention tremor, nystagmus, and all the symptoms of disseminated sclerosis. It is true that the disease had started suddenly five weeks before, after an hysterical attack of crying, but the symptoms appeared to me so characteristic that I could not help regarding the case as one of disseminated sclerosis. In extenuation of my error I may remind you of the impossibility in some cases of diagnosing hysterical tremor from disseminated sclerosis. I noticed, however, that her teeth were very defective and her gums ulcerated, and her mother stated that she had long been addicted to bolting her food and subject to constipation. I therefore prescribed for her salicylate of bismuth and cascara sagrada. After two months of this treatment she had made some improvement but the tremors and nystagmus still continued. In May she complained of swelling of the throat; the thyroid was noted as being large and the pulse was 140 per minute. The oral sepsis was remedied and the same treatment was persevered with, and by July all the symptoms had entirely disappeared. They have not returned since that time, now 16 months ago. Some might still regard this case as one of disseminated sclerosis with temporary improvement, but I would urge the sudden onset with a hysterical attack and the complete disappearance of all the symptoms of disseminated sclerosis. She still presents the hysterogenic ovarian reflex and complains from time to time of feelings of suffocation and I believe this case may be regarded as one of hysterical tremor determined by oral and gastro-intestinal sepsis.

CASE 4.—A married woman, aged 31 years, first came to the hospital in May, 1905, for hysterical attacks of various kinds. Sometimes these consisted of globus, sometimes of "dazed feelings," sometimes of trembling all over, with loss of power in the limbs. She has improved immensely under the same treatment as the last patient, and particularly during the last two months since she has taken castor oil regularly at night.

CASE 5.—A girl, aged 19 years, has been under treatment continuously since October, 1905, when she came for hysterical faints, attacks of suffocation, and inability to go on with her education as a pupil-teacher. I subsequently found she was passing mucus and "bits of skin in the stools" and after a prolonged course of treatment for mucous colitis she is now quite recovered from all the nervous and other symptoms.

CASE 6.—A girl, aged 16 years, came to the hospital in March, 1905, for convulsive seizures of considerable severity, coming on at each menstrual period ever since she first menstruated at the age of 14½ years, and occasionally in the intervals. As she was anæmic and constipated she was ordered iron and cascara with some improvement, though the fits still continued in a lesser degree. In November I discovered she had pyorrhœa alveolaris and a very notable enlargement of the thyroid, but without any of the other three signs of Graves's disease (proptosis, tachycardia, and tremor), which she told me had been noticed for a year or more, probably about the same time as the commencement of the fits. The defects in her teeth and gums were corrected in December, 1905; she has had no return of the fits for upwards of a year and feels quite well, though the thyroid is still slightly enlarged.

(*d*) I have during the last few years tried vaso-constrictors (e.g., ergot), vaso-dilators (e.g., pilocarpin), and remedies acting on the blood (e.g., calcium chloride) in cases of hysteria of various kinds, where there has been very noticeable irregularity in the vaso-motor regulator mechanism, or where I have had reason to suspect dilatation or constriction of the vessels of the central nervous system, usually in cases where other measures had failed. My efforts have not always been attended by success, for this is a new kind of treatment. Some of the cases I have recorded, and you may remember a young woman who was twice cured of her severe seizures by calcium chloride.[9] Another young woman who applied for flushings of the face and disagreeable obscure sensations all over the skin, sudden contractures of the field of vision, and dermatographia,[10] derived considerable benefit from the following prescription: extracti ergotæ, 3 grains; hamamelidin, ½ grain; hyoscyamin, $\frac{1}{150}$ grain, thrice daily. Ergot seems to steady irregular vaso-motor action as well as to constrict the vessels, as the following case shows.

CASE 7.—A married woman, aged 32 years, came to the hospital in May, 1902, for attacks of "fear of impending death" followed by palpitation and staggering which came on usually in the street but also during the night without

[6] Georges Guinon: Loc. cit.
[7] Ibid.
[8] Oppenheim's Diseases of the Nervous System, translated by E. E. Mayer, p. 739. London: Lippincott and Co. 1904.
[9] THE LANCET, Jan. 30th, 1904, p. 273.
[10] The face of this patient is figured in the Clinical Journal, Jan. 9th, 1907, p. 197.

apparent cause. She also complained of nervousness, attacks of "shaking" and acroparæsthesia. She usually felt very cold but was also subject to "hot flushes." The hands were very blue. All these symptoms had come on gradually during the past few years. Since the age of 18 years she had been liable at times to go off into a trance lasting one or two hours, sometimes several times a day. Her teeth were bad and I thought it wise first to have these attended to and the digestion improved by bismuth and diet. On Nov. 4th, 1902, I gave her calcium chloride (a remedy known to increase the coagulability of the blood), 30 grains thrice daily and nothing else but confection of senna once daily. The note two weeks later is that the "attacks of trance and other nerve symptoms are better; formerly one or two a day in series, lately none since taking med." But the digestion was upset and I had to return to the old medicine for a time. On Nov. 17th, 1903, I added extractum ergotæ liquidum (20 minims) to the medicine. This gave her very marked relief from the nervous symptoms. On Jan. 25th, 1904, it was noted that she was "so much better that she is taking the ergot medicine only once daily. The hands go white now instead of red." And for some time she ceased attending regularly. She still comes from time to time and whenever the ergot has been administered the nervous symptoms have ceased and they are now gradually disappearing. The case is interesting in this respect and also by the marked effect which the calcium chloride had upon the attacks of trance. Ichthyol, atropin, thyroid gland, and ovarian extract are also remedies which I have employed in various circumstances; but I hope to return to this subject on another occasion.

(*c*) Educational and other prophylactic measures are of great value when we remember the hereditary and inherent nature of this complaint. With careful education hysterical subjects may reveal brilliant intellects and a large proportion of them may become most useful and energetic members of the community. But when allowed to pass through a rigid form of schooling and to drag out a weary existence—circumstances commonly met with in the lower orders—they tend to gravitate into the workhouse, the brothel, or the prison. The cultivation of the will and of self-control is the central point in their education, so that the unruly reflex centres and emotions may meet their master in additional self-control. These children should be energetically, though with tact and kindness, taught to bridle their passions and to neglect small disagreeable sensations. It is of no use to get angry with them and call them shams; remember we are dealing with an individual of different nervous organisation and temperament from the average type.

The diet should be of the plainest and least stimulating kind, the life regular and free from any kind of excitement, and as much time as possible spent out of doors in contact with the grand but simple phenomena of nature. Nothing can be worse for these girls than the whirl and bustle of town life, nothing can be better than moderate exercise, bicycling, riding, or swimming. The question of sports where the exciting element of competition comes in must be carefully considered.

As age advances any tendency to introspection should, as far as possible, be quietly corrected, and especially by the cultivation of interests outside self. But, in guiding these people towards such counter attractions, screen them, as far as possible, from undue religious exercises and love affairs—two fatal directions which their fancies are very apt to take. On the other hand, the cultivation of the gentler qualities, pity, self-sacrifice, and work for others, leads to the formation of character and the self-control we desire. These people are often extremely selfish and if you can only cultivate unselfishness half the battle is won—self-control will surely follow.

If hysterical manifestations appear the patient should certainly be removed for a time from the family circle. I have sometimes found this alone sufficient to effect a cure. And even before any outbreak occurs it may be desirable, especially when the mother of the patient, as so often happens, is of an hysterical type, to consider the advisability of removing the girl or boy to the care of a judicious teacher or a suitable family. In these cases you will often be confronted with an unfortunate incompatibility between mother and daughter which will counteract all the good of the most careful education. Marriage, if suitable and happy, may prove to be the redemption of these subjects, not, as I have so often insisted on, by the gratification of the sexual passions, but by removal from incompatible surroundings, by giving to the patient fresh interests outside herself, and by the cultivation of unselfishness.

TWO CASES OF EXCISION OF RUPTURED SPLEEN.

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With an Account of the Blood Changes in the Second Case by WALTER D'ESTE EMERY, M.D., B.SC LOND., *Clinical Pathologist to King's College Hospital, London.*

CASE 1, *by* E. W. ROUGHTON.—The patient, a child, aged seven years, was run over by a light van on Jan. 5th, 1906. On admission to hospital shortly after the accident she was found to be much collapsed, was pale and restless, the extremities were cold, and the pulse-rate was 120 per minute. Muddy marks on the clothing showed that a wheel had passed over the abdomen. I saw the child three hours after admission and found that the shock was still intense. The abdominal wall was hard and moving but little with respiration. Nothing else abnormal was detected. Feeling sure that there was some severe intra-abdominal injury, I decided to explore at once. On opening the abdomen a large quantity of dark-coloured blood escaped. The liver was intact but the spleen was found to be ruptured and in a pulpy condition. A ligature was passed round the gastro-splenic omentum and the remains of the spleen were removed. There were several loose bits. The peritoneum was sponged dry of blood and was filled with hot saline solution. The abdominal wound was closed as quickly as possible, only one layer of sutures being employed. During the operation saline solution was infused into the median basilic vein. The patient was much collapsed when she was put back to bed. Subcutaneous saline infusions were used during the next two days. For a week after the operation the temperature varied from 100° to 101° F. and the pulse from 120 to 140. Afterwards convalescence was only interrupted by a slight febrile attack on Feb. 10th and 11th, the cause of which was not ascertained. The patient was discharged on March 2nd.

The child was kept under observation until Dec. 4th, 1906. At no time was there any discoverable enlargement of lymphatic glands or alteration in the bones. The blood changes during the patient's stay in hospital are summarised in the subjoined table. The last column of the table gives a differential count of the white corpuscles nearly a year after the operation. The child was seen again in June, 1907: she then had some enlargement of the glands in the axillæ, groins, and on both sides of the neck. Her general health was quite good.

CASE 2, *by* T. P. LEGG.—On Nov. 25th, 1903, a little girl, aged 12 years, was admitted to the Royal Free Hospital. It appears that at 9.30 P.M., whilst running in the street she fell against the kerbstone, striking the front of her abdomen. She went home and fainted. At 10 o'clock she was brought to the hospital. The child was in a good deal of pain; there was no evidence of any injury to the abdominal contents nor any bruising of the parietes. The pulse was 88 per minute. At midnight she was sleeping quietly, lying on her right side. The pulse had not increased in frequency; further examination did not reveal anything abnormal. During the night the pulse became more frequent hour by hour and next morning at 11 o'clock it was 128. The abdomen, which had become slightly distended, was distinctly rigid and tender on palpation, especially to the right of, and at the level of the umbilicus, where there was also slight discolouration of the skin. At this place there was an impairment of the percussion note; both flanks were resonant. The liver dulness was present. There had been no vomiting for several hours. The urine was normal. There was no marked facial pallor and the child was not restless. It seemed clear that some serious injury had resulted from the fall, the diagnosis lying between hæmorrhage and a rupture or severe bruise of the bowel. Exploratory laparotomy was performed,

A SUMMARY OF THE BLOOD CHANGES IN CASE 1 DURING THE PATIENT'S STAY IN HOSPITAL, WITH A DIFFERENTIAL COUNT OF THE WHITE CORPUSCLES NEARLY A YEAR AFTER THE OPERATION.

—	Jan. 11th.	Jan. 16th.	Jan. 20th.	Jan. 31st.	Feb. 8th.	Feb. 28th.	*Dec. 4th.*
Hæmoglobin	40 per cent.	45 per cent.	50 per cent.	52 per cent.	56 per cent.	69 per cent.	—
Red corpuscles	3,300,000	3,300,000	3,500,000	4,200,000	4,200,000	4,800,000	—
White corpuscles	29,000	26,000	21,000	12,000	19,000	10,000	*10,700*
Colour index	0·60	0·66	0·71	0·62	0·67	0·70	—
Polymorphs	79·0 per cent.	67·0 per cent.	71·0 per cent.	70·0 per cent.	65·0 per cent.	56·0 per cent.	*36·5 per cent.*
Eosinophiles	0·4 ,,	1·4 ,,	2·1 ,,	1·2 ,,	0·7 ,,	1·0 ,,	*4·0 ,,*
Lymphocytes	16·0 ,,	27·0 ,,	22·0 ,,	26·0 ,,	29·0 ,,	40·0 ,,	*57·0 ,,*
Myelocytes	1·2 ,,	1·0 ,,	0·5 ,,	0·3 ,,	0	0	*0*
Nucleated reds	2	10	0	0	0	0	*0*

an incision three inches long being made at the level of the umbilicus through the right rectus muscle, at the place where the rigidity was most marked and where the discolouration of the parietes existed. On opening the peritoneal cavity the omentum, infiltrated with blood, presented, and a large amount of dark blood with a few clots was evacuated. The incision was prolonged upwards to the right costal margin and the liver examined; it was found to be uninjured. The hand was at once passed across to the spleen which was felt to be extensively lacerated. A transverse incision across both recti muscles was then made, converting the former into a T-shaped incision. The spleen was readily brought up into the wound and the pedicle grasped by the fingers of the left hand. Around the hilum there was a large quantity of clot. The organ was freed from its peritoneal attachment, and a pedicle composed of the splenic vessels was formed and transfixed by three interlocking sutures, which were tied separately. Whilst the pedicle was being tied the respirations became hurried. The peritoneal cavity was washed out with sterilised salt solution, one and a half pints being left in it and one and a half pints being given intravenously during the operation. The wound was closed by interrupted silkworm-gut sutures passed through the whole thickness of the abdominal wall. The operation was well borne and six hours later the patient was quite comfortable. The pulse was 128 and irregular, three or four beats coming close together. A blood count was made; the red cells were 3,652,000, the whites 21,000, mostly polynuclear, and the hæmoglobin 63 per cent. The temperature was 100·8° F. On the 27th (the day after the operation) there was considerable abdominal distension but no rigidity. She had vomited frequently but only small amounts. The pulse at 6 P.M. was 154, of small volume and irregular, and the temperature was 101°. There was no restlessness. The bowels were well opened and on the 28th there was a marked improvement in the child's condition in every respect. From this time convalescence was uninterrupted and on Dec. 10th most of the stitches were removed, the wound having healed by primary union except at one place where the edges had not been sufficiently carefully approximated. She left the hospital quite well on Jan. 14th, 1904, having been kept in for purposes of observation. During the whole of this time repeated examinations of the lymphatic glands were made. On Nov. 27th a slightly enlarged gland above the left clavicle and on the 28th another in the axilla were found. They were never bigger than a pea. Later the glands in the right axilla and some in the posterior triangle of the right side were perceptible. These glands were never big and there was certainly none of the marked general enlargement of the lymphatic glands which has been noticed to follow the removal of the spleen in so many cases. There was never any tenderness in the long bones nor any enlargement of the thyroid.

A noticeable feature of the pulse was the manner in which two or three beats would come close together, and then for a time the beats would be quite regular. In the course of a few days this irregularity quite disappeared. The quantity of urine passed during the first 24 hours after the operation was 25 ounces, on the second day 25 ounces were passed, on the fourth day 46 ounces, and on the fifth day 36 ounces. During the next week the average daily amount exceeded 40 ounces. On two occasions the urea was estimated and was found to be 1·8 per cent. and 2·2 per cent. respectively. On Dec. 10th the patient had severe abdominal pain; this was probably due to intestinal disturbance secondary to a purgative. An enema resulted in a good motion and cessation of the pain. Severe griping abdominal pains have been noticed in several cases after removal of the spleen and are said to be due to the rapid enlargement of the mesenteric glands. With the exception of this attack the patient had not any abdominal pain and at no period could anything abnormal be felt in the abdomen. At the present time, more than three years after the accident, the patient is in perfect health.

Remarks by Mr. LEGG.—Injuries of the spleen may be divided into two classes: (1) those without any external wound, and (2) those with an external wound accompanied by prolapse of the organ through it. The second group of cases will not be considered in the remarks which follow.

1. *The onset of the signs and symptoms.*—In the first case evidence of a serious intra-abdominal catastrophe was soon forthcoming. In the second more than 12 hours elapsed before there was evidence of anything seriously wrong. The hæmorrhage may have taken place slowly or have ceased for a time and then recurred, or the irritation of the peritoneum by the blood may have set up the severe symptoms. The fainting which the child suffered from soon after the accident was probably due to severe pain or shock. A similar delay[1] has been observed in many other cases. The actual amount of damage sustained by the organ has not a little to do with the rapidity of the onset of the signs. In our first case the spleen was pulped and in the second there were two fissures on the diaphragmatic aspect—one just below the middle line extending completely across the organ and the other a much shorter one nearer the upper pole at the anterior border. The splenic vessels[2] may be lacerated; when this occurs the hæmorrhage is likely to be very severe. Direct blows would appear to cause more frequently laceration, whilst a crush, as by a wagon, more often leads to pulping and disintegration.

2. *The nature of the injury.*—This varies from comparatively slight accidents, as a fall of a few feet, to a severe crush, such as being run over. Kicks and blows on the left side of the abdomen are not infrequent causes. There is frequently not any bruising or other signs of external violence, which emphasises the importance of putting all patients to bed after an abdominal injury has been sustained and carefully watching them, the pulse being taken regularly at not longer intervals than an hour.

3. *The site of the pain and the area of dulness.*—These are of so much importance in the diagnosis of abdominal injuries, and as the site of the operation is largely dependent on their position they are worthy of careful attention. In our first patient the child was in such profound shock as to be unable to feel pain and there was no area of dulness detected. In the second case the area of dulness, the most intense pain, and rigidity were to the right of the umbilicus. In many cases of ruptured spleen the greatest pain and tenderness have been found in the left hypochondriac and epigastric regions, with dulness in the same regions and in the left lumbar space. It is also to be remembered that there may be a very large amount of blood in the peritoneal cavity without any dulness being elicited on percussion, as in our first case.

4 *Methods of treatment.*—There are three methods of dealing with a ruptured spleen—(*a*) to suture the lacerations,

[1] Ballance: Practitioner, vol. lx., 1898. Burrows: THE LANCET, Feb. 18th, 1905, p. 424. Savor: Centralblatt für Gynäkologie, 1898, No. 48.

[2] Heaton: Brit. Med. Jour., vol. ii., 1899.

(*b*) to remove the organ, or (*c*) to pack with gauze. Each method has been successfully used. As regards the use of sutures they are not often applicable for the following reasons. 1. The size, number, and situation of the lacerations. It would seem to be scarcely possible to unite together sufficiently accurately two nearly separate portions. From their situation it may be impossible to reach all the lacerations and the time occupied in uniting the torn surfaces would be very considerable. Moreover, these permanently arresting the hæmorrhage which can be temporarily controlled by grasping the pedicle with the fingers or by forceps. Two or three interlocking ligatures may be required. The pedicle should be divided as far from the ligatures as possible, a portion of the spleen being left behind if necessary. At the moment of tying the pedicle, there may be a change in the pulse and respiration. The hæmorrhage may have ceased at the time the operation is being performed, either because the patient is very collapsed

TABLE I.—SHOWING NUMBER OF CORPUSCLES, HÆMOGLOBIN, ETC.

—	1903.									
	Nov. 26th	Nov. 27th	Nov. 28th	Nov. 29th	Nov. 30th	Dec. 1st	Dec. 2nd	Dec. 3rd	Dec. 4th	Dec. 7th	Dec. 9th
Red corpuscles	3,652,000	3,700,000	3,080,000	2,900,000	2,824,000	3,140,000	3,720,000	3,800,000	3,750,000	3,900,000	3,960,000
Hæmoglobin	63%	68%	—	—	60%	63%	—	70%	72%	72%	75%
Colour index	0·86	0·9	—	—	1·06	1	—	0·9	0·86	0·94	0·94
Leucocytes	21,040	20,400	23,360	13,400	13,200	10,000	13,500	16,700	14,900	17,000	16,800

TABLE I. (*continued*).

—	1903.							After-history.			
								1905.			1906.
	Dec. 10th	Dec. 11th	Dec. 14th	Dec. 15th	Dec. 17th	Dec. 21st	Dec. 24th	March	April	October	Dec.
Red corpuscles	3,950,000	3,980,000	4,000,000	4,004,000	4,112,000	4,200,000	4,312,000	5,930,000	6,656,000	6,024,000	5,000,000
Hæmoglobin	75%	75%	78%	80%	80%	82%	84%	75%	86%	102%	100%
Colour index	0·94	0·94	0·97	1	0·96	0·94	—	0·63	0·64	0·84	1
Leucocytes	17,000	11,500	7,800	8,200	7,200	8,000	10,000	12,000	7,600	14,800	8,800

TABLE II.—SHOWING THE RESULT OF THE PERCENTAGE COUNTS OF THE LEUCOCYTES.

—	1903														After-history.			
															1905.			1906.
	Nov. 26th	Nov. 27th	Nov. 28th	Nov. 29th	Nov. 30th	Dec. 1st	Dec. 2nd	Dec. 3rd	Dec. 4th*	Dec. 7th	Dec. 9th	Dec. 10th	Dec. 11th	Dec. 15th	Dec. 17th	Dec. 24th	Mar.	April	Oct.	Dec.
Polynuclears	91·25	90·25	81·2	70	72·25	65·25	68·5	53·5	58·25	64	74·25	61	55·5	45·25	50	38·4	48·25	44·2	58·75	54
Small lymphocytes	4·25	7·3	15·8	28·4	21·5	28	5·5	7·5	11·75	9·25	6	16·5	16·75	19·75	24	50·4	17	—	32	37
Large lymphocytes	3·25	1·25	0	0·3	0	0·5	9	24·75	23·25	19	10·5	8·5	8·25	29·5	21	8	7·5	—	3·75	6·25
Hyaline cells	1·25	1·2	3	0·8	5·5	5	14·25	10·25	3·75	5	7·75	11·5	16·5	2·75	1·75	1·6	25	—	1·25	1·5
Total mononuclears	8·75	9·75	18·8	29·5	27	33·5	28·75	42·5	47·5	33·25	24·25	36·5	42·5	52	46·75	60	49·75	54·2	37	44·75
Eosinophiles	0	0	0	0·5	0·75	1·25	2·75	4	3	2·75	1·5	2·5	3	2·75	3·25	1·6	2	1·6	3·75	1·25

* Two myelocytes seen.

TABLE III.—SHOWING THE TOTAL NUMBERS OF THE DIFFERENT FORMS OF LEUCOCYTES.

—	1903.																After-history.			
																	1905.			1906.
	Nov. 26th	Nov. 27th	Nov. 28th	Nov. 29th	Nov. 30th	Dec. 1st	Dec. 2nd	Dec. 3rd	Dec. 4th	Dec. 7th	Dec. 9th	Dec. 10th	Dec. 11th	Dec. 15th	Dec. 17th	Dec. 24th	Mar.	April	Oct.	Dec.
Polynuclears	19199	18411	18968	9380	9537	6525	9247	8934	8679	10890	12474	10370	6382	3710	3600	3840	5790	3359	8795	4752
Small lymphocytes	894	1489	3690	3805	2838	2800	742	1252	1750	1572	1008	2805	1926	1622	1728	5040	2040		4736	3256
Large lymphocytes	683	255	0	40	0	50	1215	4133	3464	3230	1764	1445	948	2419	1512	850	900	4119	555	550
Hyalines ...	263	244	700	107	726	500	1925	1711	558	850	1302	1955	1897	225	126	160	3000		185	132
Eosinophiles	0	0	0	67	99	125	371	668	447	467	252	425	345	225	234	160	240	121	555	110

patients are not in a condition to stand a prolonged operation. 2. The hæmorrhage may be temporarily arrested but when the shock passed off it would be not unlikely to recur, the stitches not holding in the friable spleen or cutting out owing to the variations in size of the organ which normally occur.

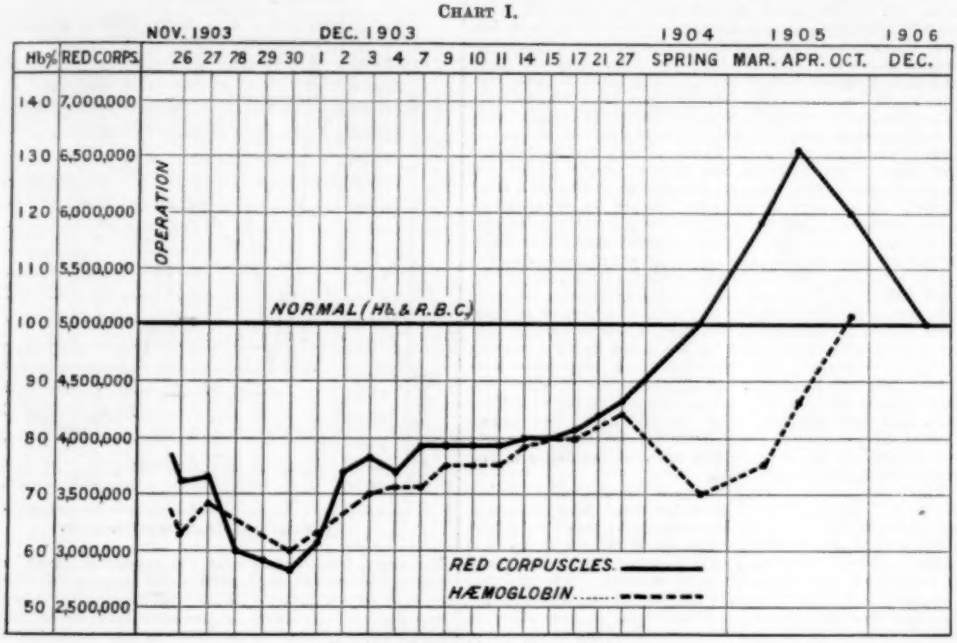
Removal of the injured spleen is the best method of treatment in the majority of cases and is the surest way of or there is a good deal of clot about the hilum, or the pedicle itself is being stretched in bringing the organ into view.

There does not seem to be anything to recommend packing with gauze, especially as removal of the organ has been shown to be quite compatible with perfect health.

5. *Effects of removal of the healthy spleen.*—These can be studied from the numerous cases which are now on record.

In many instances the patient has made an excellent immediate recovery from the operation and subsequently, after a varying interval of time, serious symptoms have developed. The patients may be divided into three classes: (1) those in whom convalescence and recovery is complete and rapid; (2) those in whom serious symptoms develop and persist for a time, being followed by a complete restoration to health; and (3) an intermediate group characterised by enlargement of the lymph glands, anæmia, some enlargement of the thyroid, and emaciation, a rapid recovery following. Age does not appear to have any determining influence as regards the onset of the symptoms. It would appear that in children recovery is generally rapid, as in these two patients.[3] In neither of them was an accessory spleen found, as has been sometimes observed. The symptoms which have followed the operation are: (1) rapid emaciation and weakness; (2) great thirst; (3) persistently rapid pulse; (4) intermittent elevation of temperature; (5) great anæmia; (6) drowsiness, peevishness, and irritability of temper; and (7) griping abdominal pain.[4]

CHART I.



Showing red corpuscles and hæmoglobin.

An Account of the Blood Changes in the Second Case, by W. D'ESTE EMERY.

As it has been held that some theoretical questions of great importance might be solved by a careful examination of the blood after splenectomy, and as this did not seem to have been done in any reported case, we resolved to carry out a full series of researches in this case; it was extremely suitable for this purpose, since the patient was apparently quite healthy before the operation, the spleen removed at the operation was quite normal and the patient recovered without presenting any complications. In all 23 examinations of the blood have been made, 18 being within a month of the operation, one during the next year, three in the second, and one in the year after; the observations thus cover a period of three years, during the whole of which time the patient remained in perfect health and underwent the normal physiological growth of this period.

The counts were, with hardly an exception, made with the same apparatus and all were made by myself. The red corpuscles were counted with a Thoma-Zeiss hæmocytometer, special precautions being taken to ensure accuracy. For the hæmoglobin a Haldane's hæmoglobinometer was employed, the same apparatus being used throughout. The leucocytes were counted in the same preparation as the red corpuscles, using the field method and working with a field eight squares in diameter, as described in my "Clinical Bacteriology and Hæmatology."[5]

The differential counts were made in all cases on films stained by Jenner's stain and only perfect and well-stained films were used; in a few cases the results were checked with triacid stain. From 500 to 1000 leucocytes were counted and in some cases the counts were repeated and the results were compared. It was found that the correspondence was not always as close as could have been wished; this was due to the fact that the mononuclear cells (the lymphocytes and hyalines) showed an unusually great range of variability, so that the class to which a cell should belong was often uncertain. The results given in Table II. were obtained with considerable care and probably represent a close approximation to the truth. The results of the counts are given on Tables I., II., and III.

Red corpuscles and hæmoglobin (see Chart I.).—The first count was taken four hours after the operation and by this time the hæmorrhage had reduced the red corpuscles to 3,652,000 and the hæmoglobin to 63 per cent. The colour-index at this time was 0·86, but we are unable to suggest a reason why it should be below normal unless the patient was slightly chlorotic at the time of the accident. The second examination showed a rise, slight as regards the number of corpuscles but pronounced as regards the amount of hæmoglobin; this phenomenon is not uncommon after severe operations and is probably due partly to the restriction of fluids and partly to the defective circulation and consequent stagnation of blood in the capillaries. It has no relation to the absence of the spleen. The secondary fall beginning on the day after the operation and lasting until the fifth day (Nov. 30th) is also a normal phenomenon, and is due to the absorption of fluid to replace that lost by the hæmorrhage; the reduction is brought about simply by a dilution of the blood that remains. It will be seen that the lowest figures met with were 60 per cent. of hæmoglobin and

[3] Ballance: Loc. cit. Haynes: Annals of Surgery, vol. xl., 1904.
[4] Heaton: loc. cit. Burrows: loc. cit. Ballance and Pitts: Transactions of the Clinical Society of London, vol. xxix., 1896. J. Rutherford Morison: THE LANCET, Jan. 7th, 1899, p. 27. Beaumont and Houseman: THE LANCET, Sept. 13th, 1902, p. 744. Bolton: Annals of Surgery, vol. xxxi., 1900.

[5] Lewis's Practical Series, 1906.

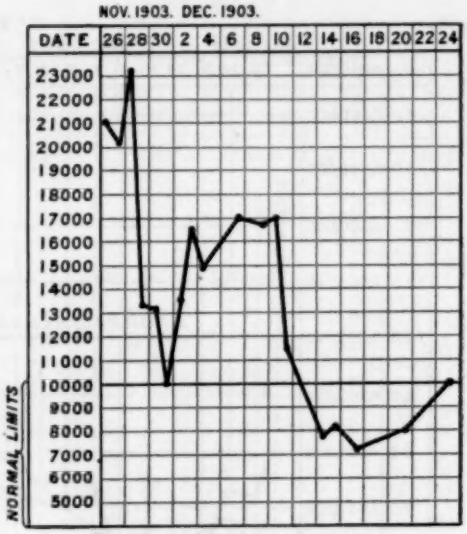
2,824,000 red corpuscles, indicating that some two-fifths of the total volume of the blood had been lost; this is a very considerable amount and one which may cause a severe strain on the organs of blood production, so that in a weakly person such a loss may be followed by anæmia of long duration. The process of regeneration appears to have commenced by the sixth day after the operation, which shows an increase of 3 per cent. of hæmoglobin and 300,000 red corpuscles over the preceding day. By the next day the increase was much more marked, the gain in red corpuscles during this period of 24 hours being 600,000, so that there was an increase of 900 000 during 48 hours. (It should be noted that the counts were made in nearly all cases at the same hour of the day.) From this point (the seventh day) there was a gradual and steady rise of both the corpuscles and the hæmoglobin, until the counts ceased on Dec. 24th, nearly a month after the operation. The red corpuscles were replaced slightly more rapidly than the hæmoglobin, so that the colour index was usually a little below normal; this is, of course, the normal process of regeneration. Lastly, a few normoblasts were found in the films during the second week—i.e., at the period of most rapid regeneration. It is interesting to note that a few myelocytes were seen at the same time, indicating great functional activity of the bone-marrow about this period. All these phenomena are quite normal and serve to indicate that the blood regeneration proceeds in an absolutely normal fashion after splenectomy. This appears to have been noted by the other surgeons who have performed the operation, to judge from the somewhat scanty data at our disposal. Thus in Pitts's and Ballance's[6] first case the regeneration was at the rate of 30,000 red corpuscles per day, in their second 20,000, and in their third 50,000. In another of Ballance's cases[7] the regeneration (taken from the date of operation to a month afterwards) was 45,000 per day, though, as in our case, the earlier stages were much more rapid. The loss of blood in these cases was not quite so great as in ours, the minimum being 3,333,333, 3,730,000, 3 590,000, and 3,280,000 respectively, whereas ours was 2,842,000. The hæmoglobin is not given in these cases except in Ballance's, but here it seems certain that some error must have crept in, since the figure never fell below 83 per cent. even when the red corpuscles were reduced to about 3,000,000. In Regnier's case, in which the hæmorrhage was very severe, the hæmoglobin fell to 20 per cent. and the red corpuscles to 2,500,000. The former reached 80 per cent. and the latter 4,700,000 in eight weeks—a formation of about 1 per cent. of hæmoglobin and 40,000 red corpuscles per diem.

The subsequent history of the case from the point of view of the red corpuscles is of some interest. An examination was made in the spring of the subsequent year (about four months after the operation) and there was found to be a slight grade of anæmia of the chlorotic type. The exact figures have unfortunately been mislaid, but the red corpuscles were approximately normal in numbers and the hæmoglobin reduced to about 70 per cent. A year after (in March, 1905, 16 months after the operation) the figures were: red corpuscles, 5,900,000 per cubic millimetre; hæmoglobin, 75 per cent., showing a decided increase in the number of red corpuscles, whereas the regeneration of the hæmoglobin had remained almost at a standstill, the amount being 10 per cent. less than a month after the operation. Considering that the onset of puberty probably took place at or about this time it is not at all improbable that this reduction (in which the colour index fell to 0·63) was of a genuine chlorotic nature.

In the following month (April, 1905, 17 months after the operation) the polycythæmia had increased to a remarkable extent, the red corpuscles numbering no fewer than 6,656,000 per cubic millimetre, the hæmoglobin being 86 per cent., and the colour index 0·64. The morphology of the corpuscles showed no deviation from the normal and there were no normoblasts or other abnormal corpuscles to be seen. We can suggest no explanation of these results, which do not appear to have been noticed previously in other cases. Six months subsequently to this the polycythæmia was still marked, though less than on the previous count. The red corpuscles were 6,000,000 and the hæmoglobin had by this time reached normal (102 per cent.), though the colour index was still low. It is obvious that these three counts happened luckily enough to have been taken at a time when some remarkable crisis occurred with regard to the formation of the red corpuscles and hæmoglobin, for in this period of seven months the hæmoglobin, which we may assume to have stood at about from 70 per cent. to 75 per cent. during the 16 months the patient had been out of the hospital, rose from 75 per cent. to 102 per cent., a gain of 27 per cent., whilst the corpuscles attained a maximum of 6,600,000 and then gradually sank. It is a little unfortunate that we have no counts immediately before and after this period. Our last count was made in December, 1906, almost exactly three years after the operation, and showed a perfectly normal condition of the blood so far as the red corpuscles and hæmoglobin were concerned: corpuscles, 5,000,000; hæmoglobin, 100 per cent. It is probable, therefore, that during the last 14 months the hæmoglobin had remained at its normal level, whilst the number of corpuscles had steadily sunk.

The leucocytes.—1. Total numbers (see Chart II.). The first count, immediately after the operation, showed a high leucocytosis which, as the differential count showed, was due entirely to an increase in the polynuclears. It remained nearly at the same level for two more days, the maximum of 23,000 being reached on the third day, about 50 hours after the operation. This leucocytosis was similar to that usually met with after severe injuries or extensive aseptic operations and does not present any point of interest. It rapidly diminished, and by the sixth day the numbers had regained a high normal level (10,000). At this period there was a secondary rise, lasting ten days (until Dec. 10th) followed by a rapid fall to normal (reached about the twelfth day) and attaining at its maximum a total height of 17,000 leucocytes per cubic millimetre. Subsequently to this the figures ranged between normal limits until the time when the examinations ceased on Dec. 24th, 1903. Our subsequent counts show that the total number of leucocytes was raised two years after the operation (October, 1905), though on one occasion (April, 1905) a normal count was met with. The study of these total numbers is, however, of but little value in the absence of the differential counts.

CHART II.



Showing the total number of leucocytes.

2. Differential counts (see Table II., which deals with the percentage counts of the different varieties of leucocytes, and Table III. and Chart III. which show their total numbers).—The latter is the more instructive. The normal limits which are marked on the latter chart are, of course, only approximate, but may be taken as fair averages. The lymphocytes are considered as ranging between 1000 and 3500 per cubic millimetre, the polynuclears between 3000 and 7500. We will now consider each portion of the curve of the total leucocytes (Chart II.) in turn. (*a*) The initial rise, as has been noted above, is due entirely

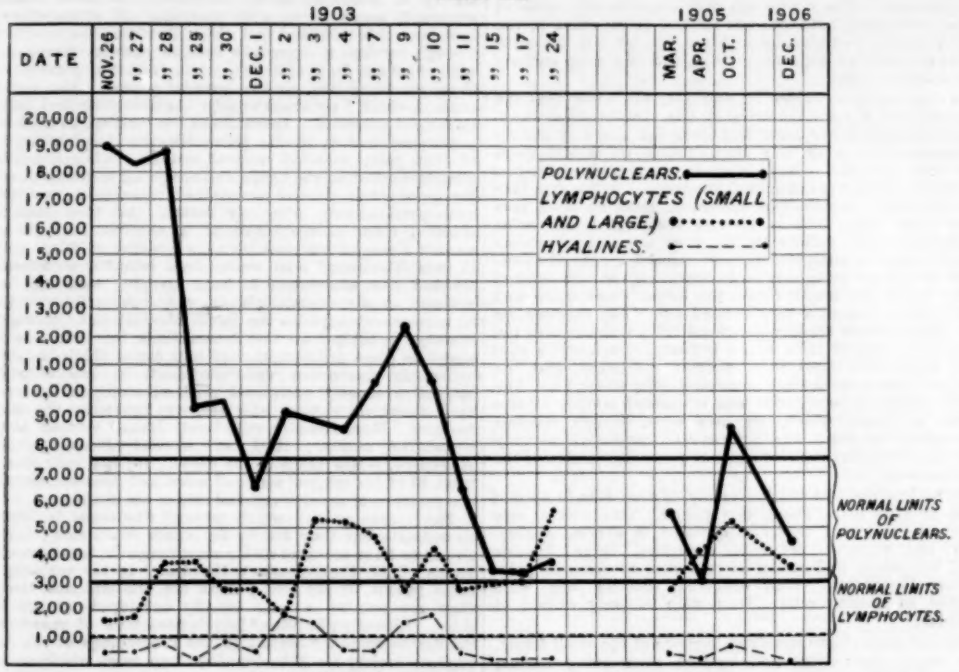
[6] Ballance and Pitts: Loc. cit.
[7] Loc. cit.

to a flood of polynuclears; the lymphocytes and hyaline corpuscles taken together formed as little as 8·75 per cent., but in spite of this the *total* lymphocytes did not fall below normal during this period. There were no eosinophiles at all to be found during this initial rise—a feature frequently met with in acute inflammations of whatever nature, and one which has no apparent connexion with the absence of the spleen. (*b*) The secondary rise, lasting from the fifth until about the tenth day, is of complex nature and is due mainly to an increase in the polynuclears, to a less extent to a lymphocytosis, and in some small degree to a reappearance of the eosinophile cells. In other words there was a mixed leucocytosis, such as is usually attributed to a stimulation of the functional activity of the whole of the blood-forming organs, especially perhaps of the bone marrow. There are several points to be noted which show beyond a doubt that there actually was a powerful stimulation of this tissue about this period. These are (1) the fact that this sudden rise of the leucocytes coincides almost exactly with the sharp rise in the red corpuscles and hæmoglobin; (2) that a few nucleated red corpuscles were present about this time; and (3) that myelocytes also occurred. But it would not be justifiable to assume that the whole of the changes are attributable to the bone marrow, for it was in the early portion of this period that the lymph glands were found to be enlarged and tender. The fall which terminated this second period of leucocytosis was due almost entirely to a diminution of the number of polynuclears. This is well shown on Chart III., where the fall is seen to commence on Dec. 9th and last until Dec. 15th, the range of numbers being between 12,474 and 3710—i.e., from a figure much above the normal upper limit to one just above the normal lower limit. We may fairly assume that the stimulation of the bone marrow ceased about Dec. 9th. During the subsequent period the lymphocytes were irregular, with perhaps a slightly downward tendency, but at the last examination of the first series (Dec. 24th) we find they had undergone a decided rise, reaching 5000 or 1500 above the normal level, at this date, the polynuclears remaining at a very low normal. It is unfortunate that the counts were not carried on for a few days longer, but the after history shows that in all probability there was actually a very decided total and relative lymphocytosis which commenced at this time and persisted for two years and perhaps for more. If we compare the total numbers of leucocytes on Dec. 1st and Dec. 24th we shall find the same (10,000) in each case, but these were very differently constituted:—

	Dec. 1st.	Dec. 24th.
Total	10,000	10,000
Polynuclears, per cent. ...	65	38
,, total	6,500	3,800
Lymphocytes, per cent. ...	28	58
,, total	2,800	5,900

(*c*) In the counts made at an interval of more than a year after the operation we see figures quite comparable with those of Dec. 24th, with the exception that in two of the examinations there was a decided leucocytosis. In all but one of these there was a relative and absolute increase of the lymphocytes. The exception was in March, 1905, in which the lymphocytes reached 2900 (24·5 per cent.), and on this occasion there was an extraordinary number of hyaline cells (3000, or 25 per cent.) so that the exception is perhaps not a real one. At the last examination, more than three years after the operation, the blood, though normal in other respects, still shows a decided increase in the lymphocytes. These cells form 43·25 per cent. of a total count of 8800 per cubic millimetre. This is equivalent to 3800 per cubic millimetre, a figure slightly but decidedly in excess of the normal. The total number of the polynuclears is normal (4700), though their percentage is necessarily reduced (54 per cent.).

CHART III.



Showing the total numbers of the various forms of leucocytes.

We may sum up these changes as follows. There was a marked polynuclear leucocytosis which fell to normal in about six days and then showed a recrudescence for some ten days, after which these leucocytes remained within normal limits. The lymphocytes, on the other hand, began to increase in numbers some seven days after the operation, and there has been a more or less marked lymphocytosis ever since.

The eosinophiles.—We have found no results which corroborate Ehrlich with regard to there being any eosinophilia after the operation. On the first three examinations these cells were absent. On the fourth day 0·5 per cent. were present, on the fifth 0·75, on the sixth 1·25, on the seventh 2·75, and on the eighth 4 per cent. After

this the figures showed the variations usually met with in healthy persons. The normal totals are generally considered as ranging between 50 and 500 per cubic millimetre. In this patient the minimum (after the first three days) was 67 and the maximum 668; this was the only occasion on which the number 500 was exceeded, except in October, 1905, two years after the operation, when 555 were met with. We may fairly consider the counts as being quite normal in this respect and the absence of the eosinophiles during the first three days is, as has been pointed out above, not peculiar to cases of splenectomy.

The mononuclear cells.—We had hopes that a careful analysis of the mononuclear leucocytes, in the early period especially, might throw some light on the relations of these cells to one another and to this end we prepared a careful list of all the varieties of lymphocytes, hyaline cells, transitional cells, &c., met with. These were arranged under ten headings, the grouping being facilitated by careful micrometric measurements where necessary. The labour expended in the preparation of this table was very great and an inspection of our results led us to the opinion that no valid conclusion could be drawn from it, so that we have stated our results on ordinary lines and have not given this extended table. We found that there was no sort of sequence in the results which we obtained in this way, a form of leucocyte which occurred in large numbers in one day being entirely absent on the next.

An inspection of Tables II. and III. will show that the lowness of the total numbers of the lymphocytes which occurred immediately after the operation was due mainly to the scarceness of the small forms, of which there were less than 900 present, whereas the large lymphocytes and hyaline cells were in normal amount. For the next four days the small lymphocytes increased, reaching 3805, four times their initial number, whereas the large lymphocytes fell to 40 and the hyalines to 70. Then the reverse process occurred and the small lymphocytes showed a general downward tendency, though usually remaining within normal limits, whilst the larger forms, the large lymphocytes and the hyalines, showed a very decided rise. For example, on Dec. 3rd the small lymphocytes were 1200, a little above the normal minimum of 1000, whilst the large lymphocytes were 4100, about five times their normal maximum, and the hyalines 1700, their normal maximum being about 400. The predominance of large forms was a marked feature of this period, a period which, we may note, though without attempting to draw any inferences therefrom, roughly coincided with that showing signs of great stimulation of the bone marrow.

We noticed one cell which is rarely, if ever, seen in normal blood in films taken about this period. This was a very large cell, attaining nearly 20 μ, which in general appearance and staining reactions resembled large hyaline cells, but which had nuclei as contorted as those of polynuclear leucocytes. They occurred scantily and were counted as hyaline cells. They were entirely devoid of granules.

The last stage shows merely an increase of the small forms, the large lymphocytes and hyaline cells being normal (October, 1905, and December, 1906).

In our opinion it would be idle to attempt to draw any conclusions as to the site of origin of the mononuclear cells from these figures. We may, however, draw attention to the fact that in the first two counts after the injury the lymphocytes were decidedly low, though not below the lower normal limit (see Chart III.). At this period they commenced to rise and this rise was fairly parallel to the enlargement of the lymphatic glands, which was first noticed on Nov. 27th and had disappeared entirely by Dec. 7th. It is possible that this early rise is due to these glands taking on unusual activity and increasing their output of lymphocytes, the number of which is reduced owing to the absence of the spleen. It seems clear that this early rise (from 1570 on Nov. 27th to 3890 on Dec. 29th) is not due to any increased output from the bone marrow, since at this time the number of polynuclears was decreasing, suggesting that the stimulation of the tissue was diminishing. At the same time, we have seen reason to believe that what I have called the "secondary rise" in which the lymphocytes took part (from Dec. 1st to Dec. 11th, or thereabouts) was due to increased activity of the bone marrow. If any importance is to be attached to these observations they would go to prove the usually accepted view that the lymphocytes arise from all three structures—bone marrow, lymph glands, and spleen.

[In addition to the references given throughout this article see Simpson, Transactions of the Clinical Society of London, vol. xxxix., 1906, and Harrison and Eve, Brit. Med. Jour., vol. i., 1906, p. 329.]

A CONSIDERATION OF SOME SYMPTOMS WHICH MAY BE PRODUCED BY SEVENTH CERVICAL RIBS.

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AN accessory rib, or pair of ribs, springing from the seventh cervical vertebra, are developmental anomalies with which all are familiar, but I venture to think that the characteristic symptoms to which they sometimes give rise are by no means so widely recognised. In these circumstances it seems worth while recording 16 cases which I have been able to collect and which illustrate the condition. Though cervical ribs produce definite vascular symptoms I wish chiefly to draw attention to the result of pressure, by these accessory ribs, on the brachial plexus. The class of cases to which I am about to refer has been described before on several occasions. Lewis Jones,[1] so long ago as 1893 in a paper published in the St. Bartholomew's Hospital Reports of that year, recorded several instances of symmetrical atrophies affecting the hands and occurring in young people. He gave a full clinical account of these cases, and they correspond closely with my series. At that time he ascribed them to the result of a neuritis, and did not suspect a seventh cervical rib as a possible exciting cause. It was Thorburn[2] who really first brought prominently forward the association of hand atrophy, resulting from pressure on the brachial plexus, with a seventh cervical rib in a communication to the Royal Medical and Chirurgical Society, published in the Transactions for 1905. In his paper he gives a description of four cases which had been under his observation and treatment, in two of which subjective sensory symptoms predominated; in the other two muscular wasting and sensory loss were the chief features. More recently still Lewis Jones,[3] writing in the September number, 1906, of *Medical Electrology and Radiology*, refers again to his cases. He has been able to trace 14 of his original series of cases and has demonstrated the presence of seventh cervical ribs in ten of these.

The frequency with which cervical ribs occur is difficult to estimate but they are by no means uncommon; four or five cases have occurred within recent years in the dissecting-rooms of St. Bartholomew's Hospital. In the majority of cases (about 70 per cent.) there are bilateral ribs, though they are not as a rule equally developed on the two sides. Llewellyn Phillips,[4] late demonstrator of anatomy at St. Bartholomew's Hospital, in the Proceedings of the Anatomical Society for 1900, described two cases which he had fully dissected. In the first case, that of a man, besides the cervical ribs there were various slight developmental anomalies present in the bony skeleton. The cervical ribs were bilateral but not symmetrical; that on the right side was fully developed, resembling closely the first dorsal rib, and consisted of head, neck, tubercle, and body; it articulated posteriorly with the sixth and seventh cervical vertebræ and intervertebral disc, and anteriorly with a cartilage which was ossified, and which in turn articulated with a cartilage joining the manubrium sterni. The rib on the left side was shorter and narrower and reached neither the sternum nor the first dorsal rib. The upper surface of each rib was grooved by the lowest trunk of the brachial plexus, which passed over it. Both ribs were moveable within narrow limits.

The second case was that of a woman, but the ribs, though similar, were not so fully developed, that on the left side being quite rudimentary. It was only about one inch in length, yet its upper surface was also grooved by a root of the plexus; it was firmly fixed, thus differing from the other

[1] St. Bartholomew's Hospital Reports, 1893.
[2] Transactions of the Royal Medical and Chirurgical Society, 1905.
[3] Medical Electrology and Radiology.
[4] Proceedings of the Anatomical Society of Great Britain and Ireland, 1900.

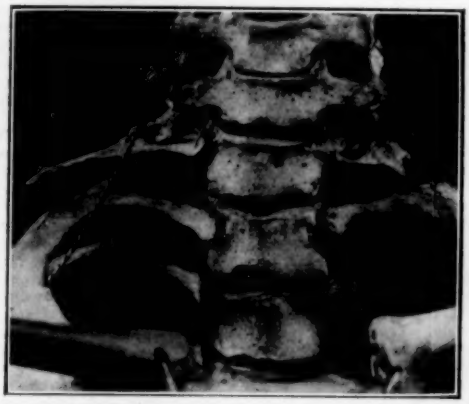
three. The ribs received considerable muscular attachments from an extra intercostal muscle and from the scaleni. Perhaps the most important point in connexion with these cases is that they illustrate the relationship which may exist between the brachial plexus and even a rudimentary cervical rib. In these circumstances an imperfectly developed rib, which can hardly extend beyond the transverse process of the first dorsal vertebra, may yet cause pressure effects on the brachial plexus. The relation of the plexus to these ribs has been further disclosed by findings at operations for their removal. In one of my cases in which the rib was removed by Mr. W. D. Harmer, the rib, a large one, was found to push the lower part of the plexus forward in front of it, but, without an undue amount of dissection, it was not possible to determine accurately what root or cord of the plexus was most involved. In another instance, however, Mr. L. B. Rawling[3] at operation found the cervical rib lying between, and exerting pressure on, the eighth cervical and first dorsal root, which united a short distance beyond the rib. At first sight it appears difficult to see how a first dorsal root can come into intimate relation with a seventh cervical rib, but the direction of the first dorsal root on its way to enter into the formation of the plexus must be remembered. It passes almost directly upwards over the neck of the first dorsal rib and so might come without any difficulty into direct relationship with a seventh cervical rib which was growing somewhat downwards and forwards. That this is probable is shown by examining the appearances seen in skiagrams and comparing them with the clinical findings; as a rule, those ribs which appear to grow directly outwards from the spine do not cause pressure symptoms so often as those which seem to grow downwards and with a slightly forward tendency. Further, it is noteworthy that the longer ribs seem to produce symptoms less often than the shorter, stumpy ones. It is possible that the first dorsal root may be damaged by a seventh cervical rib without actually lying constantly in relation to that rib. The first dorsal root lies on the superior aspect of the neck and body of the first rib and may be compressed in this position between this rib and a seventh cervical one, more especially during lateral movements of the head and neck. The shortness of the ribs which produce symptoms, and the fact that improvement has followed removal of the first dorsal rib both point to this as a possible explanation in some cases.

Gruber[4] classifies cervical ribs under four heads: (1) smallest type—rib does not project beyond transverse process, resembles articular end of a thoracic rib with head, neck, and tubercle, articulating with body and anterior aspect of transverse process of seventh cervical vertebra; (2) larger rib reaches a varying distance beyond transverse process, terminating in a free end or articulating with the osseous part of the first dorsal rib; (3) the rib may reach the first costal cartilage which it joins either by ligament or by direct contact; and (4) the rib is in all respects like a first dorsal rib articulating with the manubrium sterni.

I propose now to give a short description of my series of cases and subsequently to discuss certain points which arise in connexion with them.

CASE 1.—The patient, a female, aged 28 years, gave a history of pain affecting the radial border of the left wrist for the last two years. The hand was constantly cold and all symptoms were worse in cold weather. The left hand was weak and the patient constantly dropped anything she might be holding. She was in all respects normal except in the left forearm and hand. Flexion and extension of the wrist were weaker in the left than the right; flexion was most affected. The fingers were similarly weak. The grasp was weak, with some overaction of the extensors of the wrist and slight ulnar deviation. The muscles of the left hand were all much wasted, most markedly the thenar muscles and first and second interossei. As regards electrical reactions, in the extensors of the wrist and fingers there was some diminution to faradism; otherwise they were normal. The reaction of degeneration was present in the thenar, hypothenar, and first and second interossei, though there was no polar change; the third and fourth interossei appeared to be normal. Sensation: Subjective—as above. Objective—there was definite alteration in an area involving the ulnar border of the forearm corresponding to the first dorsal root distribution. Anæsthesia was moderate in degree with perhaps pain more affected than tactile sensation. The pupils were equal and the pulses at the wrist were equal. Nothing abnormal was felt in the neck. A skiagram showed well-marked bilateral seventh cervical ribs.

FIG. 1.



Reproduction of photograph of the cervical region of a female skeleton in the Royal College of Surgeons' Museum and reproduced by kind permission of the Council. The illustration shows bilateral but asymmetrical cervical ribs, that on the right side resembling a first thoracic rib in miniature, that on the left side being quite rudimentary and ankylosed. The photograph illustrates well how high the neck of the first rib is above the clavicle.

CASE 2.—The patient was a female, aged 21 years. There had been a history of pain for the last two years, which had been felt at first all over the right arm from the hand to the shoulder, and which later had settled along the ulnar border of the right forearm. A gradual onset of muscular weakness was noticed first when the patient attempted to cut wire with pliers. The muscles of the right hand were much wasted. This was most marked in the first dorsal interosseous and thenar eminence, the abductor, flexor brevis, and opponens pollicis suffering more than the adductors. The flexors of the wrist and fingers were affected in a slight degree. Electrical reactions in the forearm were normal. In the interossei there was marked diminution to faradic excitability; fairly brisk to galvanism (partial reaction of degeneration). In the thenar muscles there was well-marked reaction of degeneration; in the hypothenar partial reaction of degeneration. There was well-marked first dorsal anæsthesia. The pupils were equal, as were also the radial pulses. A skiagram showed bilateral cervical ribs.

CASE 3.—The patient was a male, aged 37 years, with a history of gradual and progressive weakness of the left forearm and hand extending over five years. There was an obvious swelling in the left supraclavicular fossa, with visible pulsation. The left forearm was markedly smaller than the right, with much flattening of the inner border, more marked atrophy of the hand muscles, and main-en-griffe. The grasp was very weak, with extension of the wrist, the flexors of the fingers and wrist having very little voluntary power. The aspect of the left arm resembled that seen in syringomyelia. The extensors of the wrist and fingers were affected also to a small extent. There was partial reaction of degeneration in the flexors (most) and the extensors of the wrist and fingers. No response was obtained in the hand muscles. There was no subjective painful sensation at all. There was marked sensory loss in the first dorsal and eighth cervical distribution. The pulses were unequal at the wrist, the right radial being almost double the left. The skin of the left hand and forearm was much cyanosed and the extremity was always very cold. A skiagram showed bilateral cervical ribs.

An operation was performed by Mr. Harmer on June 12th, 1906. A well-formed cervical rib was removed, about one and a quarter inches long, which did not articulate with the sternum or the first dorsal rib. It was seen that the lower cords of the brachial plexus were pushed forwards in front

[3] Medical Electrology and Radiology, September, 1906.
[4] Gruber quoted by Fürnrohr, Die Röntgenstrahlen in Dienst der Neurologie, 1906.

of the rib, and were under considerable pressure. The radial pulse improved immediately after operation. On June 27th the wound had healed by first intention and sensation was returning. On July 16th the anæsthesia was almost gone. It was noticed that the serratus magnus was very weak on the left side and showed partial reaction of degeneration. In December, 1906, the muscular power was much improved and the wasted muscles showed slight signs of filling out, the serratus magnus was greatly improved, while the electrical reactions were normal in the extensors, much improved in the flexors, but still absent in the hand. Sensation in the first dorsal area was normal. There was slight loss of sensation on the palmar and dorsal aspect of the terminal phalanges of the third and fourth fingers (remains of anæsthesia of the eighth cervical root).

CASE 4.—The patient was a female, aged 42 years. The history of the case showed that the condition had commenced 20 years previously when very severe pains in the right elbow and the inner side of the right arm were experienced, so severe that she had to give up work, which always caused an exacerbation, as also did cold. Soon after the pain was first noticed the muscles of the hand began to waste. Flexion and extension of the wrist were weaker on the right than on the left. Flexor spasm was noticed in the second, third, and fourth fingers, and extension of the distal phalanges in these fingers could not be performed voluntarily. There was no power in the interossei, the thenar and hypothenar groups being much wasted and very weak. Electrical reactions appeared to be little affected in the extensors and flexors of the wrist and fingers. There was reaction of degeneration in the thenar and hypothenar muscles and there was no response at all in the interossei. There was anæsthesia in the first dorsal and eight cervical distribution. The right radial pulse was less than the left. A skiagram revealed bilateral cervical ribs. The patient has thought lately that the left hand is getting weak, but there is no evidence of this.

CASE 5.—The patient was a boy, aged 13 years. Six weeks previously, after swimming for too long a time, he had felt pain in the right wrist which was followed by weakness in that hand so that he dropped things. On examination no very marked wasting in the right forearm and hand was made out, but the hand was very slightly in main-en-griffe position, and there was marked weakness in the intrinsic hand muscles and very slight weakness in the flexors of the wrist and fingers. There was reaction of degeneration with polar change in the thenar group and in the first and second interossei, and reaction of degeneration with no polar change in the third and fourth interossei and hypothenar muscles. The forearm muscles were normal and the pulses were equal. There was slight diminution of sensation to light stimuli in the first dorsal area and there was more marked diminution to painful sensations. A skiagram showed bilateral cervical ribs.

CASE 6.—The patient, a woman, aged 43 years, had experienced the feeling of "pins and needles" in the right hand for 18 months. There had been pain for the last two months extending from the elbow to the little finger of the right arm of an aching character which was described as feeling "right in the bone." The pain was worse after exertion, and in cold weather, and at night. At the same time as the pain the patient first noticed that the right hand was weak, she could not wring clothes and when scrubbing could not get the floors clean, and she had difficulty in holding the needle when sewing, and in picking up pins, and so on. More recently she had had spasmodic contractions in the first and fourth fingers. The movements of the right arm all seemed slightly weaker than those of the left, though all could be well performed and with fair strength. Pronation and supination were slightly weaker in the right arm than in the left. Extension of the wrist was slightly weak; flexion was more affected and was definitely weak. There was less power in extending the fingers of the right hand than of the left and very much less power in flexing them. The thenar muscles were wasted, opposition and abduction being lost. In the interossei there was some wasting and they were definitely weak. The hypothenar muscles appeared to be practically unaffected. The grasp of the hand was poor. Sensation: subjective—as above; objective—slight tactile anæsthesia in the first dorsal distribution of the right side, analgesia was more marked, also slightly in the eighth cervical. There was typical reaction of regeneration with polar change in the thenar muscles and flexors of the fingers and partial reaction of degeneration in the interossei. The hypothenar muscles were normal. A cervical rib was palpable in the neck on the right side. The pulses and pupils were equal. A skiagram showed bilateral cervical ribs.

This case was operated on by Mr. Rawling at St. Bartholomew's Hospital on Jan. 24th, 1906. The abnormal rib was removed as far back as the transverse process of the seventh cervical vertebra. The rib was crossed and grooved by two nerve roots, though it was impossible to define exactly which they were. The wound healed by first intention. After the operation for two days the patient had lost power in the deltoid, triceps, and biceps, but this has steadily improved and their power is now almost normal. There has been no further pain in the arm and on testing, the sensory loss has almost entirely disappeared. The patient states that the wasted muscles have filled out a little and this seems to be the case. The operation is too recent for anything like considerable improvement to have occurred.†

CASE 7.—The patient was a woman, aged 33 years, and the symptoms had commenced when she was 28 years of age, at which time she first noticed numbness, followed by pain, along the ulnar border of the right forearm. This was followed by gradually increasing weakness of the right forearm and hand. The symptoms were unilateral. There was slight wasting of the flexor group of muscles on the inner side of the forearm—the flexors of the wrist seemed normal but those of the fingers were weaker in the right than in the left hand. The thenar muscles, especially the abductor and flexor brevis pollicis, were much wasted, as was also the first dorsal interosseous muscle—the remaining interossei and the hypothenar muscles showed only slight change. The second, third, and fourth fingers were held slightly flexed. There was reaction of degeneration in the abductor and flexor brevis pollicis, with partial reaction of degeneration in the interossei and hypothenar group. The reactions in the flexors of the wrist and forearm were normal. There was slight analgesia in the first dorsal root distribution, where, however, a light touch was easily appreciated. The pupils were normal and the pulses were equal. A skiagram showed bilateral but asymmetrical ribs.

CASE 8.—The patient, a girl, aged 18 years, had experienced the first symptoms—"rheumatic pains" in the left arm when wearing a tight coat—ten years previously. Four years before coming for treatment the arm had been twisted in play, since which time she had always felt pain in it, which was very severe sometimes, burning in character, and causing her to drop anything she was holding. The pain was situated chiefly in the middle of the biceps and in the middle of the forearm. A year later the hand began to get weak and to waste. The symptoms were entirely unilateral. There was a tender spot in the left supra-clavicular fossa and a hard lump could be felt, and when this was pressed upon pain was felt in the places referred to. There was no objective sensory change. The movements of the upper left arm were good and the power was the same as in the right arm. There was some flattening along the ulnar border. The hand was slightly in main-en-griffe position and the third finger was markedly over-extended. Extension of the wrist and fingers was very slightly affected; flexion was markedly weak, the third finger being much weakest in flexion. The patient could not strike a note on a piano with this finger. There was wasting of the thenar eminence, with marked weakness in abduction and opposition of the thumb. Wasting was also marked in the interossei with guttering of the palm and dorsum of the hand. The hypothenar muscles also were wasted but not to the same extent. There was diminished response to the faradic current in the extensors of the wrist and fingers. The galvanic response remained brisk. Reaction of degeneration was present in the remainder of the muscles mentioned. Pulses: the left was much smaller than the right. A skiagram showed double cervical ribs, that on the right side being much longer than, and running in a different direction from, that on the left.

CASE 9.—The patient, a woman, aged 32 years, gave a history of pains on the outer side of the right arm extending over a period of 12 years. She thought the symptoms followed an attack of influenza. After this the hand began to waste. She had suffered from cramp in the fingers of the hand for several years when making any strain upon them and for the last few months had complained of involuntary twitchings of the third finger of the right hand. The forearm was not wasted, but the thenar group of muscles were

† The patient has now almost entirely recovered.

much atrophied and movements were very weak. The interossei and hypothenar muscles seemed to have escaped. The electrical reactions were normal except in the thenar muscles, which did not respond at all. Sensation was normal and the pulses were equal at the wrist. A skiagram showed bilateral and very large cervical ribs, also considerable scoliosis in the cervical and upper dorsal region of the spinal column.

CASE 10.—The patient was a woman, aged 48 years, who gave a history of pains of long standing—she did not know exactly how long. She had had feelings of numbness and at times severe pain from the shoulder to the hand, both right and left, which were worse in winter and after exertion. The right thenar eminence alone was wasted and weak, all the other hand muscles seemed normal. There was reaction of degeneration in the wasted muscles, sensation was normal, and the pulses were equal at the wrist. A skiagram revealed bilateral cervical ribs.

CASE 11.—The patient, a woman, aged 54 years, gave a history of symptoms of long standing, the exact time being unknown. There had been tingling and numbness in the first and second fingers of the left hand, also slight flexor spasm in the third and fourth fingers, with abduction of the fourth finger. There was marked wasting of the interossei, but the thenar and hypothenar groups of muscles appeared to be normal. The muscular wasting was of recent origin, about one year. The was reaction of degeneration with polar change in the interossei and in the adductors of the thumb; all the other muscles reacted normally. There was slight diminution of sensation to light stimuli over the two outer fingers and thumb. The pulses were equal at the wrist. A skiagram showed bilateral cervical ribs.

CASE 12.—The patient was a girl, aged 11 years. The history of the case was that a year previously the patient had begun to complain of a dull aching pain, ill-defined in character and locality, in the left arm; shortly after this the thenar muscles of that hand began to waste and she had lost considerable power in the thumb. No other muscles were affected, but the thenar group showed marked wasting. There was reaction of degeneration in the affected muscles. Sensation was not abnormal and the pulses were equal. A skiagram showed bilateral cervical ribs, that on the left side being most prominent and the right rib being very rudimentary.

CASE 13.—The patient, a woman, aged 49 years, had had tingling sensations along the median nerve distribution in the right hand for two years. Loss of power in the thumb followed, associated with wasting of the abductor and flexor brevis pollicis and spasm in the adductors of the thumb. There was reaction of degeneration in the wasted muscles. The sensory changes were very slight diminution to tactile and painful stimuli in the distal phalanges of the thumb and the first and second fingers on the palmar and dorsal aspect. The pulses were equal at the wrist. A skiagram showed short bilateral cervical ribs.

On July 12th Mr. Sargent operated and removed the right cervical rib. It did not seem to be exerting any particular pressure on the cords of the plexus. No injury was done to the plexus at the time of the operation. On the 21st all movements in the arm were lost except slight flexion of the fingers. At the present time (January, 1907) the patient writes to say that the arm is still much weaker than before operation. She can almost get her arm straight above her head but she cannot get her hand behind her back. She can almost put her hand on the top and back of her head but she has very little power in it. The thumb has not got any stronger, but the wasting away seems to have stopped and the muscles have filled out, but only slightly.

CASE 14.—The patient, a woman, aged 29 years, gave a history of pain in the right thumb and radial border of the arm 18 months previously. The onset had been sudden. The pain was always made worse by exertion. Muscular wasting in the thenar group followed the pain, but no other hand muscles were affected. There was reaction of degeneration in the wasted muscles. The sensory changes were similar to those described in Case 13. A skiagram showed bilateral cervical ribs. The wasted muscles improved slightly after an operation in which the first dorsal rib was removed.

CASE 15.—The patient was a woman, aged 40 years, with a history of symptoms of six months' duration. There had been pain in the left shoulder and down the left arm, with "pins and needles" at times. It was worse when the arm hung down by the side or after exertion, especially after washing. A tender spot was felt in the supraclavicular region on the left side. The hands were said to feel weak, but no muscular wasting was noted and the electrical reactions were normal. There were no sensory changes. A skiagram showed short bilateral cervical ribs.

CASE 16.—The patient, a female, aged 27 years, gave a history of pain on the dorsal aspect of the right hand and a "tired feeling" along the inner side of the right forearm which had lasted for ten months. There was no muscular wasting, the electrical reactions were normal, and there were no sensory changes. A skiagram revealed bilateral cervical ribs.

In none of the above cases was any further change discovered in the nervous system than that described in the text. In no case were any sympathetic symptoms noted.

It will be seen from the above series that individual cases might be selected which differ widely from each other, and this fact might be used as an argument against the cervical rib as the common causative factor in all. I must admit that to some extent this is true, but it is only in the last two cases, where subjective sensations alone existed, that the diagnosis is really in doubt; and Thorburn, in his paper already referred to, has described cases very similar where operative procedure and removal of the cervical rib conclusively established the diagnosis by removing the pain. In the remaining cases the difference is only one of degree; I regard the first eight cases as typical examples of the fully developed symptom complex caused by pressure on the brachial plexus by the seventh cervical rib.

Before proceeding to analyse these cases it is necessary to establish the accuracy of the diagnosis. The only possible conditions which could produce similar symptoms, or symptoms at all comparable to those quoted, would be syringomyelia, anterior poliomyelitis acuta or chronica, peripheral neuritis, and the class of cases described by Farquhar Buzzard[8] as uniradicular palsies of the brachial plexus.

From syringomyelia the diagnosis is almost self evident. Ocular changes, common in this condition, are almost unknown in connexion with cervical ribs, nor are the reflexes in the latter condition abnormal. Sensory changes in the cervical rib cases are confined to the first dorsal or eighth cervical root distribution, though within these areas dissociative changes are to a certain extent met with. Scoliosis in the cervical region is occasionally met with but not to any great extent. Any sensory changes when present at once exclude either an infantile paralysis or progressive muscular atrophy. Further, the onset in infantile paralysis is usually distinctive, and, moreover, it is rare to find the hand muscles alone affected in this disease. From progressive muscular atrophy the diagnosis in the absence of sensory changes may be more difficult but the progress of the two cases is quite dissimilar. In progressive muscular atrophy both hands are affected sooner or later, whilst many of the rib cases remain strictly unilateral; nor are the reflexes ever increased in the latter condition. Further, the electrical reactions differ; whereas in progresive muscular atrophy the rule is for a simple diminution to the faradic and galvanic currents to exist, in the cervical rib cases one meets with reaction of degeneration in its most typical form. This only occurs in the former case when the disease is running a very rapid course, in which case the diagnosis could not long remain in doubt.

From peripheral neuritis, the root distribution of the muscular wasting and the sensory loss (when such is present) make diagnosis easy. With regard to Buzzard's cases of uniradicular palsies of the lower roots of the brachial plexus the diagnosis without an x ray examination is well-nigh impossible. The clinical picture in both cases closely corresponds, for both are due to a lesion which chiefly affects the first dorsal root. Of the two conditions I think that caused by a cervical rib is by far the commoner, for of the eight cases in which the muscular wasting and sensory loss corresponded to some of the cases described by Buzzard the skiagram showed the presence in all of definite cervical ribs. In two of these cases the ribs have been removed, with marked improvement resulting. This result of operative interference is, of course, the strongest link in the chain of evidence pointing to cervical ribs as the cause of the symptoms described. All operations have not been equally successful, it is true, but I think sufficient have been so to prove the point conclusively. Besides the two cases of my series which have been operated on with marked benefit and

[8] Brain, 1902.

a third (Case 14) where improvement has been slight, the following successful cases have been recorded: Thorburn[9] two, Weber[10] two, and Seiffer[11] and Déjerine[12] one each.

I think it is fair to conclude from the above evidence that a seventh cervical rib does give rise at times to certain well-defined symptoms from pressure on the roots of the brachial plexus, that in fully developed cases the diagnosis is easy and that a skiagram should, of course, be taken to confirm the diagnosis; lastly, that a number of cases also occur in which minor degrees of muscular wasting and sensory changes exist. Analysis of the cases collected brings out several interesting points.

Sex.—14 out of the 16 cases were in women and the reason for this is by no means obvious; there is nothing to show that a cervical rib is commoner in woman than in man, nor can laborious occupation be an exciting factor, or we should have expected to find the preponderance of cases in men. Possibly certain arm movements may bring the plexus more into direct relation with the rib, as, for instance, scrubbing floors, but the women in whom the condition has occurred are not all charwomen. Possibly the more thoracic type of respiration in women may exert some influence, but such influence must be slight indeed.

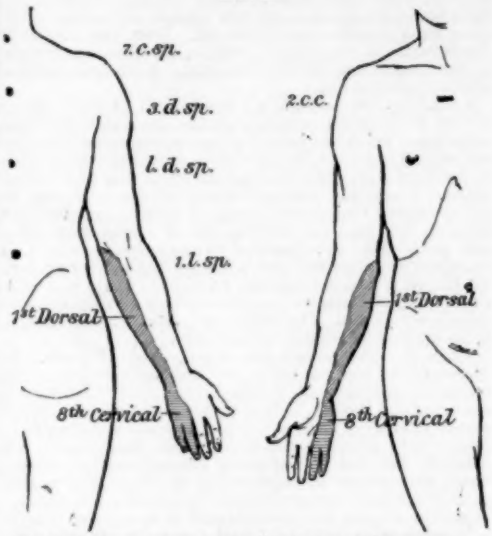
Age.—10 out of the 16 cases occurred in persons under the age of 30 years, the explanation of this no doubt being that this period corresponds to the more active growth and ossification of the ribs. In the cases occurring at a later age it is possible that the increasing rigidity of the accessory rib, perhaps going on to firm ankylosis, may be responsible for the production of symptoms, which the rib in a more moveable condition had failed to produce.

Sensory changes.—Both subjective and objective sensory disturbances are met with, the former being almost invariably present, while the latter were noted in nine of the cases. Pain is the predominant feature of the subjective changes and is specially influenced by exertion, in which the arms are involved, and by cold. The patients always complain more in winter than in summer. The pain may be severe—in one case it was so pronounced that the patient had to give up work; it is variously described as "sharp rheumatic pain," a "dull aching in the bone," "burning pain," and so on. Numbness and tingling were pronounced in two cases. The situation to which the pain is referred has varied, but is usually stated to extend from the shoulder to the hand on the affected side, being specially noticeable at the elbow and along the ulnar side of the forearm.

Objective changes.—The typical thing is undoubtedly loss in the distribution of the eighth cervical and first dorsal root (*vide* diagram), the latter being the most affected, and sometimes existing alone; I have never found a case where the eighth cervical loss was present alone; as a rule one finds slight dissociation phenomena, the tactile loss being less pronounced than the analgesia. This was also a feature of Buzzard's cases and indicates a root lesion, as Sherrington first pointed out. Déjerine[13] has recorded a case in which a cervical rib was accompanied by paræsthesia and definite sensory loss in the fifth and sixth cervical distribution. The rib was removed and the sensory disturbances cleared up subsequently to the operation. In three cases there was very slight tactile diminution found over the thumb and first and second fingers, the change being most marked, but never profound, over the dorsal and palmar aspect of the distal phalanges. In two cases the changes were purely subjective and unaccompanied by any muscular weakness or wasting, and the electrical reactions of the hand muscles were normal.

Motor system.—Muscular wasting and weakness are in most of the cases chiefly noticeable in the intrinsic hand muscles, but in the more severe cases the flexors of the wrist and fingers may be considerably affected—the fingers, as a rule, more severely than the wrist muscles. The grasp is weak with extension of the wrist and the hand at rest in the pronounced cases assumes the main-en-griffe position. Wasting and muscular disability are usually most marked in the thenar muscles, and of these the abductor and flexor brevis seem to suffer most; in some cases these are the only muscles affected to any considerable extent. The interossei and hypothenar muscles suffer to a less extent. There may be some degree of spasm in the flexors of the third and fourth fingers in cases where the muscular paralysis is not far advanced. Thorburn noted this point in his cases. There is sometimes abduction of the little finger. Even in cases of long standing the electrical testing of the affected muscles showed the presence of reaction of degeneration in its typical form, though where the muscular wasting was excessive the electrical response to galvanism, as well as faradism, could not be obtained. In all the recent cases reaction of degeneration was present. The motor and sensory changes thus point to a lesion which, in the majority

FIG. 2.



The shaded areas represent the distribution of the sensory loss met with in complete cases of cervical ribs. Analgesia is as a rule more pronounced than tactile anæsthesia in these areas.

of cases, involves chiefly the first dorsal root, with less interference with the eighth cervical root, which indeed may entirely escape.

Other phenomena which have been attributed to cervical ribs.—Sympathetic nerve: In none of the cases here recorded was there any affection whatever of the cervical sympathetic, but Fürnrohr[14] records an instance of sympathetic eye symptoms associated with a cervical rib. The patient, a young girl, had complained for about six months of widening of the palpebral fissure and proptosis of the right eye; the right pupil was noticed to be wider than the left, the thyroid gland was slightly enlarged, and the right carotid pulsated more violently than the left. A radiogram showed a rib growing from the sixth cervical vertebra. It is not stated whether the rib was removed, with the subsequent cure of the symptoms.

Scoliosis.—According to Fürnrohr,[15] Garré[16] first drew attention to this symptom as a possible complication of cervical ribs. There is, he says, a displacement of the scapula on the same side as the cervical rib upwards and outwards and a deviation of the vertebral column, with the convex curve towards the accessory rib, in the cervical region, whilst a compensatory curve in the opposite direction is met with in the lower dorsal vertebræ. This scoliosis is by no means a constant feature and by many is regarded as accidental so far as the rib is concerned. Though only markedly present in one of my cases (Case 9) it occurred to a less extent in two others (Cases 1 and 4).

Syringomyelia.—This has been described by Oppenheim and others as occurring in cases where the radiogram has shown the presence of cervical ribs (the ribs being regarded as part of a widespread developmental anomaly). I do not know if any evidence exists to show that cervical ribs are more common in patients with syringomyelia than in others.

[9] Transactions of the Royal Medical and Chirurgical Society, 1905.
[10] Münchener Medicinische Wochenschrift, 1905, No. 33.
[11] Monatschrift für Psychiatrie und Neurologie, 1904, Heft 4.
[12] Neurologisches Centralblatt, 1903, No.
[13] Ibid.
[14] Die Röntgenstrahlen in Dienst der Neurologie.
[15] Ibid.
[16] Zeitschrift für Orthopädische Chirurgie, Band ii., No. 1.

It is quite possible that the simultaneous occurrence of the two conditions may have been simply accidental.

A word as to radiograms and their interpretation in cases where a rib is suspected. The photograph is best taken with the patient in the dorsal decubitus and the plate behind the neck. With a "low" osmium tube of about 5-inch spark gap and a 10-inch coil I think an exposure of from one and a half to two minutes has given the best results. It is sometimes difficult to say whether a definite cervical rib or a rather abnormally developed tranverse process of the seventh cervical vertebra is present. I have photographed a skeleton where these transverse processes are particularly well developed, but in the radiogram they do not nearly reach in lateral extent the extremity of the transverse process of the first dorsal vertebra. I think that a transverse process or rudimentary rib, which extends beyond the first dorsal transverse process, should be regarded as a potential factor for the production of pressure symptoms. Phillips's dissection, already quoted, supports this view.

As a result of a number of radiograms of the neck taken at the National Hospital one has noted that in the first place cervical ribs may be present and produce no symptoms, and secondly, that though nearly all the cases of cervical ribs are bilateral—in the greater number the symptoms are unilateral. The explanation of this, I feel sure, entirely depends on the direction of growth taken by the rib. Those ribs which grow straight out from the spinal column or incline a little backwards (and therefore show most conspicuously in radiograms) are little liable to produce pressure symptoms. Whilst the rib which seems to grow forwards, or forwards and downwards, is almost invariably associated with some injury of the plexus.

The treatment of the various conditions produced by cervical ribs may be divided broadly into (1) palliative and (2) radical.

FIG. 3.

Bilateral and symmetrical cervical ribs (Case 4).

Palliative treatment.—This consists in rest to the arm as much as possible, the use of blisters as counter-irritants if subjective sensory phenomena are conspicuous, or the use of the constant current over the painful areas. The anode should be used as the active electrode and a current of 8 to 10 milliampères employed. In some cases this will suffice to remove the greater part of the pain, aided perhaps by the use of a liniment composed of mesotan and olive oil, in equal proportions, care being necessary to prevent irritation of the skin by this method. For the muscular condition much can be done in the slight cases by massage and the use of electricity, using a combined faradic and galvanic current sufficiently strong to produce a medium contraction in the affected muscles. Under this treatment some of the cases will show a decided improvement, but more probably will not. In some cases the painful sensations cease of themselves and the muscular wasting becomes arrested, leaving a hand that is still useful though not normal, the thumb movements being most restricted.

Radical treatment.—The question of operative interference is raised when the pain is extremely severe or when muscular wasting has advanced to such an extent as to interfere considerably with the utility of the hand, but in my opinion palliative treatment should always first be given a trial. In the slighter cases I do not think that operative interference is to be recommended as it is not attended by universally satisfactory results. When undertaken it is most important that it should be complete, by which I mean that the periosteum should be removed with the rib. The necessity for this is shown by a case which Weber has recorded, where a subperiosteal excision was first performed with temporary relief of pain, but new bone was formed and the symptoms recurred to be ultimately cured by a complete removal. Unsatisfactory results sometimes occur. I have seen two cases, and another is recorded by Fürnrohr,[17] where a more or less complete paralysis of the whole arm (especially affecting the deltoid) occurred after the operation, and this, too, without any obvious injury being done to the plexus at the time. One of these cases proved most intractable, but the other two cleared up almost completely within two months. The brachial plexus seems to resent any such handling or stretching, as is almost unavoidable during the operation. In another case a paralysis with reaction of degeneration resulted in the serratus magnus and though this ultimately improved very much the muscle has not yet, seven months after the operation, completely recovered. When one remembers the course of the posterior thoracic nerve it is not difficult to realise how easily it might be injured in the manipulations necessary for the removal of a seventh cervical rib. An important point for the surgeon to bear in mind is that the cervical rib lies much higher in the neck than is usually expected. The first dorsal rib has in several instances been mistaken for a seventh cervical rib and at times has been removed in error—a mistake which may be easily made when one recollects that the latter may articulate with the sternum, has muscular attachments from the scalene and intercostal muscles, and in some cases is crossed by an abnormally high subclavian artery.

Mr. Rawling, who very kindly operated on one of my cases, has expressed himself to me on the subject as follows. He bases his remarks on two cases on which he has operated himself and on two others which were operated on at St. Bartholomew's Hospital. 1. The ribs in all these cases have been short, projecting only from 1 to 2 inches beyond the tip of the transverse process. The ribs were directed outwards for a short distance and there turned markedly downwards and forwards. 2. The upper aspect of the rib is definitely grooved by a nerve trunk, though it is not always possible without testing electrically to identify which trunk is present. 3. Complete removal is usually a matter of very great difficulty, due to the small area of operative field and the numerous muscular attachments which the rib receives. In removing these many small, but troublesome, vessels are divided. 4. The rib is by no means easy to find. It seems to lie in such a manner that its tip is embedded in the substance of the scalenus medius and posticus muscles. It also lies at a very much higher plane than is usually anticipated, the very great obliquity of the first rib being forgotten.

In conclusion I wish to express my best thanks to those members of the staff of the National Hospital who have most kindly allowed me to make use of their cases.

Queen Anne-street, W.

A CASE OF ACUTE LEUKÆMIA (LYMPHOCYTHÆMIA).

BY HAROLD H. E. SCATLIFF, M.A. OXON., M.R.C.S. ENG.,
ASSISTANT SURGEON TO THE BRIGHTON THROAT AND EAR HOSPITAL;
AND
EDMUND HOBHOUSE, M.D. OXON.,
PHYSICIAN TO THE SUSSEX COUNTY HOSPITAL.

With Pathological Notes by F. G. BUSHNELL, M.D. Lond.,
Pathologist to the Sussex County Hospital.

THE patient, a man, aged 20½ years, an Englishman, though resident in Morocco for a good part of his life, was first seen on Jan. 2nd of this year. He complained of a swelling on his leg of three days' duration. There was a large hæmatoma of the size of an egg, fluctuating in the centre, and situated over the internal saphenous vein of the right leg; the inguinal glands were enlarged and tender, and the temperature was 101° F.; there was no thrombosis in the vein above or below. There was no history of local trauma, the lump having appeared spontaneously, but three weeks or

[17] Die Röntgenstrahlen in Deinst der Neurologie.

a month before this the patient had burnt the dorsum of the foot on that side and thought he had poisoned the wound with a coloured sock, as the burn did not completely heal till about a week before he was seen on Jan. 2nd. The swelling was opened by Mr. A. H. Buck under a general anæsthetic and sanious pus was evacuated; at the same time it was noted that there were several small subcutaneous hæmorrhages or bruises on the toes. The temperature went down for a day or two and the swelling of the inguinal glands disappeared, but the wound, though clean, showed no tendency to heal as it should. The patient at the time felt very well. On Jan. 12th his temperature rose to 101° again and there was offensive and frequent diarrhœa. A dose of oleum ricini was given and subsequent treatment with no improvement. As the symptoms on the 12th resembled those of septic poisoning Dr. Hobhouse was asked to see the patient. Meanwhile the sputum had been tested and a Widal examination had been made, but both with a negative result. Dr. Hobhouse suggested a blood examination for septic organisms. The patient was taking medicinally at the time salicylate of bismuth and quinine, and as regards his general condition he had a daily septic temperature, no headache, slight enlargement of the spleen, hæmic murmurs over the base of the heart, and spongy gums. The diarrhœa stopped on the 16th, but the cervical glands were enlarged and tender on both sides.

Dr. Bushnell sent the following report from his blood examination: "Mr. H. Scatliff asked me to undertake a bacteriological examination of the blood. Ten cubic centimetres were sown in 250 cubic centimetres of bouillon on serum and agar. In 24 hours, at 37°C., a distinct turbidity was noticed in the broth and was found to be due to bodies resembling micrococci in appearance, size, and staining reactions. At the time these were thought to be staphylococci, but in the absence of growth in subculture on this and on several subsequent occasions in bouillon and blood cultures they may be regarded as artefacts from the presence of particles of (?) proteid nature (doubtless such forms would be instanced as evidences of spontaneous evolution of life by some observers). Blood-films showed a marked lymphocytosis."

As the blood from the last note of Dr. Bushnell appeared to be that of a patient suffering from leukæmia as well, he made a further blood count, quantitative and qualitative, as follows:—

"Blood examination showed—hæmoglobin, 40 per cent.; red cells, 2,240,000 per cubic millimetre; and leucocytes, 61,300 per cubic millimetre.

Differential Count of Leucocytes.

—	Per cent.	Absolute number.	
		Patient.	Normal.
Polymorphonuclear...	18·5	11,895	6500
Eosinophiles	2·3	1,478	300
Small lymphocytes	20·8	13,371	} 2500
Large ,, ...	50·8	32,664	
Transitional cells	6·0	3,856	—
Myelocytes	0·5	321	—
Hyaline cells	0·5	321	600
Mast ,, ...	—	—	100

Remarks.—There is severe anæmia with colour index approaching normal (0·9) and a tenfold leucocytosis with 18 times the number of lymphocytes normally present and twice the number of polynuclears. The polynuclears are practically non-granular with Leishman's stain and a large number of the lymphocytes have a few neutrophilic granules and are vacuolated. The blood is characterised by the absence of the differentiations present in the leucocytes of the elaborated normal blood. In the apparently purposeless proliferation of these cells and in the fatal cachexia ensuing we have evidence of a malignant new growth of the blood cells of the nature of a sarcomatosis. The cachexia would appear to be due to misappropriation of nourishment by these leucocytes. As has been pointed out before by me,[1] and as is exemplified here, we have connecting links between simple growths and malignant neoplasms and between leukæmic, lymphadenomatous, and sarcomatous affections (i.e., blood diseases and malignant growths). The greatest interest lies in treatment and in the importance of elucidating the nature of recoveries in man and lower animals (mice) from spontaneous or experimentally produced malignant neoplasms."

It was now apparent that the original hæmatoma was only a symptom of the disease, that is a manifestation of the multiple hæmorrhages which followed so rapidly. The patient at this time was very cheerful, with a daily temperature of 101° F. in the morning and between 99° and 100° in the evening (see chart). Eight weeks before this date he had played hockey for his college, feeling, however, greatly done up after each game. The subsequent history is shortly as follows.

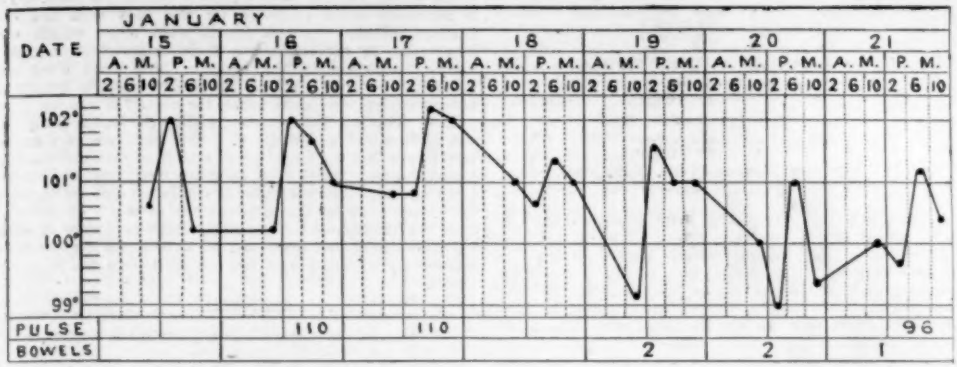
On Jan. 27th epistaxis started but was easily controlled. The cervical glands alone were enlarged. There was a continuous evening temperature. The leg wound started healing. There was no albumin in the urine. The patient was in the fresh air as much as possible, being fed up and taking iron and arsenic, the latter in increasing doses, and pills of calcium chloride.

On Feb. 3rd there was epistaxis as a rule every other day, not from any bleeding spot, but capillary oozing from the mucous membrane, both on the septum and turbinals; it was easily controlled by a strip of gauze in the anterior nares for half an hour. The cervical glands were less enlarged and the temperature was rather lower each day, but always above 99°. The gums were very spongy and bled readily. The spleen was two and a half fingers' breadth beyond the costal margin. About this time a short trial of the x rays was made but was discontinued. Towards the end of February the epistaxis was more frequent; there was a large submucous hæmorrhage on the soft palate. The mucous membranes were now very anæmic and the skin was sallow. There was dyspnœa on the least exertion and albumin was present in the urine.

On March 1st the patient had an attack of enteritis lasting for a day or two but improving under treatment; this returned, however, on the 7th with the passage of a small quantity of blood and lasted till his death. The blood was more or less bright and the motions were offensive. Epistaxis was present during a part of each day. Some enlargement of the liver was noticed now. There was no pleural effusion and the optic discs were clear. On the 9th Dr. Hobhouse again saw the patient. β naphthol was suggested and oxygen, and owing to a request from his medical attendant in Morocco atoxyl was given in small doses subcutaneously. On the 11th œdema of the feet and ankles was present with small petechiæ scattered over the legs. The gums were bleeding continuously and the epistaxis and melæna continued. On the 12th the patient was in the same condition. One of the incisor teeth fell out and others were loose. The breath was very foul and he was drowsy. On the 13th and 14th there were continuous dyspnœa and cardiac dilatation. On the 15th the patient died during sleep.

Remarks by Dr. HOBHOUSE.—Acute lymphocythæmia is comparatively a rare disease. Out of 17,000 medical admissions at the Johns Hopkins Hospital, McCrae found that there were 13 of lymphatic leukæmia, of which five only were acute. Its genesis and many of the attendant conditions are obscure, so that it is desirable to record every case of the disease so far as it is known. The preceding case, which I twice had the pleasure of seeing with Mr. Scatliff, was in many ways a typical one and presents several features of interest. When I first saw the patient his condition in some respects suggested typhoid fever, in others an acute septic infection, but there was none of the depression usually associated with either. The patient felt well, did not look very ill, and thought he ought to be up, though his temperature was nearly 103° F. The condition of the gums resembled scurvy, as they were swollen and bleeding. His colour at that time did not suggest any blood dyscrasia, but this may have been partly due to the fact that he was seen by artificial light, as his friends say that they noticed some pallor in October. At my next visit (March 9th) the sallow hue was a very marked feature, closely resembling that of pernicious anæmia. The blood picture was fairly typical of what is usually found in the disease, but the number of polymorphonuclears was

[1] Cf. F. G. Bushnell: Structural Continuity in New Growths, Brit. Med. Jour., Dec. 1st, 1906; A Case of Generalised Sarcoma with Blood Changes (containing references on the subject), Transactions of the Pathological Society of Great Britain and Ireland. J. E. Farmer, J. E. S. Moore, and C. E. Walker: The Behaviour of Leucocytes in Malignant Growths, Transactions of the Pathological Society of London, 1905.



larger than is usually found when the disease is acute—viz., 18·0 per cent. Many of the large lymphocytes were granular and myelocytes were practically absent. Apart from the blood count, the hectic temperature, the hæmorrhage from the mucous membranes, the purpuric eruption (which may be general or local and is often the earliest symptom), and the moderate enlargement of the spleen and of the lymphatic glands constituted a striking clinical picture which once seen can hardly be missed. It may suggest in turn several diseases—typhoid fever, scurvy, purpura, and acute septicæmia—but is consistent with none of them. A blood examination even of the most superficial character will reveal the nature of the disease. It is only one more proof of the desirability of a blood examination in all doubtful cases. The age of the patient is also suggestive. As to the ultimate nature of the disease, whether it is due to an infection or whether it is really a lympho-sarcomatosis of the blood, we are at present in the dark; the evidence is fairly equally divided.

Two remarks may be made in conclusion. 1. That whatever explanation is offered it must be one which will embrace all forms of leukæmia, for every kind of transitional stage between the spleno-medullary and lymphatic forms is met with and they cannot be taken apart. 2. The parasitic theory is the only one which in the present state of our knowledge offers us any hope as regards treatment—viz., on vaccine lines—but it must not be forgotten, if organisms are found, that they may be only a terminal infection indicative of the special vulnerability of the tissues.

A DANGEROUS DRY SHAMPOO.

BY HORACE C. COLMAN, M.D. EDIN.

With Additional Remarks by C. R. MARSHALL, M.A., M.D. Vict., *Professor of Materia Medica in the University of St. Andrews.*

A LADY was attended recently at her own house by a hairdresser for the purpose of cutting and dry shampooing her hair. The operation took place in a moderate sized bathroom with the window slightly open; the room was probably rather warm. After the cutting process was finished the lady placed her head over the basin in the usual fashion and the operator proceeded to pour some liquid over her head. At once she cried out that it was far too strong, and the man replied that it would soon pass off. Her next recollection is that of finding herself propped up on the floor, a wet towel round her head, the window wide open, and a very frightened hairdresser fanning her vigorously with a towel. She was informed that she had been unconscious for five minutes and had been a very nasty colour. Assistance was obtained and she was put to bed, where I saw her shortly after. She had vomited severely before my arrival and she told me that she felt just as she did after taking chloroform and her appearance tallied exactly with her description of her feelings. Her colour was bad and her pulse was somewhat accelerated; she had a severe headache and complained greatly of nausea. During the night she vomited once more, but in a day or two she was all right again and in her usual good health.

The hairdresser told her that the liquid used was tetrachloride of carbon and that he had used it eight times that week. On making inquiries of the man's employer I found that the drug is in frequent use for dry shampooing and that it came into use after a fatality with petrol in a barber's shop in London. I further found that in a shop it was the custom to use a form of apparatus to keep the vapour away from the customer's face, but that the "trade" seemed quite unaware of the dangerous nature of the liquid which appears to be in frequent use. The hairdresser gave me a bottle of the liquid as supplied to him and this Professor C. R. Marshall kindly undertook to examine. It is only necessary to read Professor Marshall's remarks, which he has allowed me to publish, to feel assured that what, happily, was only an extremely unpleasant experience for the lady might easily have ended in her death and that hairdressers will be well advised to seek some liquid less dangerous to use.

Remarks by Professor MARSHALL.—The liquid given me by Dr. Colman smelled strongly of commercial carbon disulphide, but on submitting it to fractional distillation it was found to consist of carbon tetrachloride, containing a trace of the impurities usually present in carbon disulphide and which give to it its unpleasant odour. No carbon disulphide itself was present in the liquid but some mixed perfume in alcohol had been added.

The symptoms described by Dr. Colman were certainly due to the inhalation of carbon tetrachloride. This substance was investigated in the "sixties" by Richardson, Simpson, Sansom, Nunneley, and others, and it was given by inhalation about that period for headache, neuralgia, chorea, &c. As it was found to produce decided ill-effects its use was abandoned. Since that time it has received very little attention from pharmacologists or clinicians. My own experiments, made nine years ago, are probably the most recent. In these I compared the action of chloroform and carbon tetrachloride, more particularly as regards their toxicity. The action of carbon tetrachloride was found to resemble that of chloroform, the differences being explicable to a large extent by differences in physical characters (vapour pressure, solubility in water, &c.). It is important to note that all observers have found carbon tetrachloride to be more toxic than chloroform. It is more irritant to mucous membranes and is much more depressant to the circulatory and respiratory systems. During its inhalation cardiac weakness and irregularity and cyanosis have been described and after the return of consciousness cardiac weakness, headache, and mental and bodily exhaustion have been noted. Anæsthesia is less easily produced and is slower in appearing than that by chloroform owing to the lower vapour pressure of carbon tetrachloride (boiling point of chloroform from 60° to 62° C., of carbon tetrachloride 76·5° C.), but it also disappears less quickly. It is probably owing to this relatively low vapour pressure that no fatalities have hitherto been described but it is obvious that such a dangerous substance should not be in the hands of hairdressers to use on all and sundry.

Broughty Ferry, N.B.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF TETANUS.

BY D. LEIGHTON DAVIES, M.D., M.S. LOND.

THE patient, a healthy-looking farm labourer, aged 45 years, fell down on the road and sustained a cut over the right malar bone. The wound was not treated in any way and in the course of the next few days it kept "gathering and discharging." Six days later he felt his jaws becoming stiff and on the seventh day he was quite unable to open his mouth. When seen on the following day—i.e., eight days after the infliction of the wound—he was quite unable to move his lower jaw more than one-sixth of an inch. There was a suppurating wound over the right malar bone just below the outer margin of the orbit. From this a track passed beneath the skin for about one and a half inches into the cheek and this contained a quantity of yellow pus. No bare bone was felt. There was slight chemosis of the conjunctiva of the right eye. He was intelligent and, except for the trismus, complained of no pain. There was complete right facial paralysis, the furrows on the right side of the forehead and the naso-labial fold being obliterated. There was inability to close the right eye and the lower eyelid had fallen away from the globe of the eye. The mouth was drawn over to the left. Both masseter muscles felt firm, but could be made harder by voluntary effort. There was no spasticity or paralysis of any other muscles of the body, the neck muscles being quite normal. There was no loss of sensation anywhere. Both knee-jerks were brisk and the plantar reflex was flexor. His pulse was normal in rate and his temperature was 99° F. On the next day (i.e., the third day of the illness) laryngeal spasms developed. Sudden paroxysms of intense dyspnœa would occur from time to time, during which there was tremendous action of the platysma myoides, giving the face a very hideous expression. He became almost maniacal during these paroxysms, tearing the dressings off his head and throwing himself about violently, and all the while he was bathed with a profuse perspiration. There was no cyanosis even during an attack and the pulse was strong. The temperature remained normal. In the intervals between the paroxysms the neck appeared to be a little stiff. To allay the paroxysms he was given a quarter of a grain of morphine hypodermically and this gave him relief for over 12 hours. At the expiration of that time he suddenly became worse, jumped out of bed in a frenzy, and fell back dead. Unfortunately, a post-mortem examination was not permitted, but I succeeded in obtaining the trunk of the facial nerve of the right side as it left the stylo-mastoid foramen. To the naked eye it looked quite normal and microscopical examination showed an entire absence of pathological changes both in the neurilemma and the nerve fibres themselves.

Remarks.—The case was undoubtedly an example of infection with the tetanus bacillus, though at the time I overlooked the desirability of taking some of the pus for bacteriological examination. It differs, however, from the somewhat meagre description of this variety as given in the text-books I have consulted. The prognosis is stated to be somewhat more favourable in this variety than in the generalised type, but in this case death occurred three days from the onset of symptoms and nine days after the opportunity of infection occurred, and there was an entire absence of generalised spasm. There was no pharyngeal spasm but the laryngeal spasm was very distressing. The sudden termination of the disease in death may have been due to the laryngeal spasm or more probably to a sudden spasm of the cardiac muscle caused by the action of the toxin on the vagus centre. With regard to the underlying pathological changes leading to the facial paralysis, it has in the past been suggested that there was an ascending neuritis of the facial nerve. In the cases that have been examined no such changes have been found in the facial nerve and certainly there was no neuritis in this case. It is very probable that the paralysis is due to the action of an excessive dose of a virulent toxin on the nucleus of the facial nerve leading to the destruction of its cells. This is rendered more probable by the fact that the only muscles affected by the spasm were those which were innervated by nerves having their origin from nuclei in the neighbourhood of the seventh. The toxin must have reached the facial nucleus by passing up the lymphatics accompanying the facial nerve, for clearly it was not likely to have been the blood-stream, seeing the region picked out was so localised and definite. This fact, too, may explain why it was that the facial nerve was paralysed and the other nerves escaped, for it may be conjectured that the virulent toxin meeting first the cells of the facial nucleus destroyed them, and that by the combination of some of the toxin with the protoplasm of the cells, which is known to occur, the virulence of the toxin was diminished so that its action was merely irritating and not destructive on the remaining nuclei.

Wisbech.

CALCIUM SALTS AS A CARDIAC TONIC.

BY JOSEPH STARK, L.R.C.P. & S. EDIN., L.F.P.S. GLASG

CALCIUM salts have come much into prominence of late in the treatment of ulcers, both internal and external; they are also advocated for chilblains and to be given before operations likely to be attended with severe hæmorrhage. The well-known therapeutic effect of calcium salts is that they increase the coagulability of the blood. It is therefore quite easily understood why they are given in cases where hæmorrhage is anticipated but in cases of cardiac disease and pneumonia I think that some reasoning is required before accepting the same. Having under my care a married woman, aged 40 years, suffering from an ulcer on one of her legs, which seemed to be due to deep varicosity of veins I gave her 15 grains of calcium chloride three time a day. At the time I did not further examine her as she was fully dressed. I was called out on the third day of treatment to see her—she was complaining of numbness of the right side of the body and was cyanotic. The next day she was a little better but still had the feeling of "pins and needles" in her right arm and leg. On the following day she had complete hemiplegia. There is no doubt on account of the slow onset that the lesion was due to cerebral thrombosis. I may state that I had now further examined the patient and found that she had a mitral lesion. I thought of my treatment and the therapeutic use of the same and came to the conclusion that the calcium salts had something to do with the condition of the patient. Sir James Barr has lately advocated calcium salts in pneumonia. It is well known that an ante-mortem clot is found in the pulmonary artery in most of the fatal cases of pneumonia. Then why should the practitioner endeavour to increase the coagulability of the blood? Dr. W. Blair Bell says that it is only in certain cases that we should use the same. I do not think that Dr. Bell's method of examining the blood is applicable in general practice and therefore I would advise general practitioners at least not to treat pneumonia and diseases of the heart by the calcium salts.

Annfield Plain, R.S.O., Durham.

HERNIA OF ILEUM PRESENTING OVER THE THORACIC WALL.

BY HERCULES H. MACDONNELL, M.D. DUB.,
SURGEON, LOUTH COUNTY INFIRMARY.

A MAN, aged 23 years, was admitted into the Louth County Infirmary, Dundalk, on Oct. 8th, 1906. On the previous day he had been knocked off his bicycle. On admission he complained of faintness and pain over the chest, and a small tumour about two inches in diameter was seen situated over the sixth and seventh ribs on the left side about two and a half inches from the border of the sternum; this was extremely painful to the touch, so much so that a thorough examination without the aid of an anæsthetic was not possible; for several reasons it was not considered advisable to administer one. The skin over the tumour had a slightly bluish appearance. A tentative diagnosis of fractured ribs with a possible hæmatoma was made. Pads were placed at either side of the tumour to avoid pressure and a broad flannel roller applied over the thorax. The bowels were freely moved on the next day. On the fourth day after admission, on removing the pads

and bandage to make a further examination, a superficial area of four inches broad was seen to be bright red and fluctuation was felt. The surface having been sterilised a free incision was made over a director, when an escape of gas and faculent matter took place. A portion of intestine, doubled on itself, of the thickness of a thumb and gangrenous, was found lying in the wound; the tissues were undermined in every direction with faculent matter. The bowel having been with some difficulty drawn up till a healthy portion was reached was divided, one end was sewn to the skin, and a thoroughly permeable fistula established. Owing to the patient's collapse and to the state of the tissues it was not deemed advisable to proceed then to further operative measures. As much of the gangrenous intestine as possible was removed. Subsequently rectal alimentation was carried out, which for a time succeeded extremely well, eventually enabling a little strong beef essence to be taken by the mouth, but after a week this had to be discontinued, as faculent matter, discharged through the opening, brought on such an unhealthy condition of the integument and subjacent tissues. Small enemata of saline solution used for the purpose of maintaining the rectum in a healthy condition were passed through the thoracic wound, but the patient gradually became weaker. As soon as the tissues surrounding the fistula were brought into a tolerably healthy condition an end-to-end anastomosis with a Murphy's button was carried out; eight hours afterwards flatus and fæces were passed freely through the anus, but the patient gradually sank and died in about 24 hours. During the operation the track of the hernia was carefully traced by dissection; the bowel, a portion of the ileum, was seen to escape from the abdominal cavity at the extremity of the ninth rib, passing over the eighth rib, and had forced its passage up to the upper border of the sixth rib.

Dundalk, co. Louth.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Congenital Night Blindness.—Subretinal Cysticercus.—Metastatic Tumour of Choroid.

A MEETING of this society was held on June 13th, Mr. PRIESTLEY SMITH, the President, being in the chair.

Mr. E. NETTLESHIP communicated a genealogy in which Congenital Stationary Night Blindness occurred in Nine Consecutive Generations during about 250 years. This disease, often hereditary, was less known than retinitis pigmentosa and its so-called unpigmented variety and, unlike them, did not progress. A great part of the present case was published by Cunier nearly 70 years ago and had been mentioned by many writers. But the nature of the disease was unknown until a year ago, when, at Mr. Nettleship's request, Professor Truc of Montpellier examined several living night-blind descendants, established the diagnosis, and instituted a fresh inquiry, resulting in an extension of Cunier's tables from upwards of 600 persons in seven generations, to nearly 1800 in ten generations. Only certain branches of this large tree, containing about 260 persons, bore the disease, and of this number just one-half (129) contained in 60 childships were affected. In half the affected childships (29) the proportion of diseased to healthy agreed with the Mendelian theory; others showed a near approach to agreement, and others again would conform if the dominance were supposed to have been reversed. About a quarter of the cases seemed inconsistent with Mendelism, but incompleteness of record doubtless accounted for some of these. The disease always passed from parent to child without a break, was rather commoner in females than males, did not lead to blindness, and was not accompanied by any other defects or peculiarities. It was not due to consanguinity; there were only two first cousin and seven second cousin marriages, and only one of these nine produced night-blind children. No ophthalmoscopic changes were noted.

Mr. L. WERNER (Dublin) showed a coloured ophthalmoscopic drawing, lantern slides, and microscopic sections of a Subretinal Cysticercus. The patient, a youth, aged 19 years, had noticed a failure of sight in the right eye for four months. The eye was normal in outward appearance and the tension was also normal, but in the fundus close to the optic disc was a large spherical projection covered by the retina and resembling an intraocular tumour. It presented a transparent, bluish-white appearance with a very delicate margin in some parts. The surface was smooth and marked with white connective tissue-like areas and a small portion was pigmented. A remarkable feature was the presence of a deep pit in the tumour and also an enormously dilated retinal vessel, which disappeared abruptly in the growth. The diagnosis was doubtful and the eye was removed. On examination it was found that the growth was an intra-retinal cyst, in which a cysticercus had been encapsuled. The pit seen in the growth with the ophthalmoscope was found to be due to a mass of granulation tissue, which divided the cyst into two cavities in the sections. It extended from the posterior to the anterior wall and by retraction of the latter produced a depression in it. The blood-supply of the granulation tissue was derived from the dilated vessel alluded to before. Mr. Werner stated that intra-retinal cysticerci were very rare, for of 29 cases anatomically examined only three were in the retina.

Mr. WHITEHEAD read notes of (1) a case of Metastatic Tumour of the Choroid. A mammary tumour, which had been present two years, was removed seven years ago. Recurrence took place in the scar and many metastatic tumours appeared in various parts of the body. Vision failed in the right eye and after four weeks the eye became blind and glaucoma set in. The eyeball was excised and a flat growth was present in the choroid. Microscopically this was found to consist of closely packed spindle-shaped cells with an excess of fibrous tissue between irregular groups of tumour cells. 2. A case of Multiple Cysts of the Retina associated with Glaucoma.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Specimens.—Administration of Gas and Ethyl Chloride.—Massage and Movement in the Treatment of Fractures.—The Naso-pharynx as Infection Carrier in Epidemic Cerebro-spinal Meningitis.

A MEETING of this society was held on June 5th, Dr. J. O. AFFLECK, the President, being in the chair.

Dr. R. W. PHILIP showed a series of specimens from cases of Poisoning by Hydrochloric Acid.

Mr. WILLIAM GUY read a paper on the Administration of Gas and Ethyl Chloride. He said that, having administered anæsthetics to some 26,000 patients without mishap, without experiencing a moment's anxiety, or having to use a pair of tongue forceps or to practise artificial respiration, he might be allowed to express some confidence in his methods. He employed from time to time all the usual agents alone, in mixture, and in sequence, but his present practice was to use nitrous oxide for all operations that could be performed in 30 seconds, nitrous oxide and ether for operations requiring from one and a half to three and a half minutes, and nitrous oxide and ethyl chloride mixture for operations requiring from 30 to 90 seconds, this last class comprising the great majority of hospital extraction operations. He referred to "somnoform" and said that although it was unstable and expensive and had no advantages over ethyl chloride alone Dr. Rolland's researches in connexion with it were of great value in drawing attention to its constituents, particularly ethyl chloride. Ethyl cloride was at present under a cloud owing to the large number of deaths (30) recorded as attending its use and to its disagreeable after-effects. He quoted the opinions of authorities and said he had himself entirely given up the use of ethyl chloride by itself, because the mixture of gas and ethyl chloride was in every way preferable. The dangers of ethyl chloride anæsthesia were (1) direct cardiac inhibition; and (2) asphyxia from (*a*) partial or complete respiratory obstruction; and (*b*) paralysis of the respiratory centre by an overdose. The first danger was avoided by giving nitrous oxide to slight narcosis before ethyl chloride; the other dangers must be met by taking all precautions to eliminate the asphyxial element and by keeping the dose of the drug and the time of administration within the ascertained limits of safety. He described his apparatus and method of

administration. He referred to the importance of not stretching the patient's neck. He used gags which were a slight modification of Hewitt's gags. He insisted on the gag always being placed centrally, never at the side of the mouth, and his gags therefore had horizontal instead of sloping surfaces. He rather advocated the use of a small centrally-placed gag as a routine procedure in anæsthesia, the ready access thus afforded to the mouth being of incalculable value in case of obstructive respiration. He used a one-gallon bag of gas, allowed the patient to rebreathe gas for five respirations, then poured in the ethyl chloride, the dose of which never exceeded three cubic centimetres, and allowed the mixture to be breathed and rebreathed for 25 seconds. By this practice wonderfully uniform results were obtained. The induction was pleasant, the recovery immediate, and after-effects were extremely rare. The residual air was sufficient to oxygenate the blood during the brief inhalation, consequently there was no cyanosis and with the dose limited to three cubic centimetres and the time of inhalation also limited there was no danger of an overdose. The temperature of the room should not be below 60° F. and the bag should be dry; the mixture was strictly a single dose anæsthetic and should never be used for long operations. He thought ethyl chloride would be rehabilitated in the eyes of the profession if its use alone were abandoned, if its limitations were recognised, and above all if it were given only in mixture with gas in a suitable apparatus and with a defined maximum of dose and time of inhalation never to be exceeded save by exceptionally experienced anæsthetists. His apparatus had been made for him by Messrs. Gardner and Son.—Dr. T. D. LUKE, Mr. J. H. GIBBS, and the PRESIDENT took part in the discussion which followed.

Mr. CHARLES W. CATHCART read a paper on the Use of Massage and Movement in the Treatment of Fractures. He said that with very few exceptions every fracture could have massage applied to it with much benefit to the patient. The methods of treating fractures which were universally accepted 20 years ago and which were still practised by perhaps the majority of surgeons were based upon the supposed necessity of absolute immobility of the broken ends of the bone until the callus was well formed. Immobility was a first principle and as a corollary the rule was that the apparatus which fixed the broken ends should also fix the joint above and the joint below. The period during which immobility was kept up varied from three weeks to three months or longer. After union the return of the limb to functional usefulness was taken into consideration but not before. It was then found that the weakness and stiffness of the muscles and the limited range of movements of the neighbouring joints often entailed more than double the period of functional disability of the injured limb and in many cases were permanent. These consequences were considered to be inevitable. The experience of Professor L. Championnière, Professor Guermonprez, and others in France, of Mr. A. G. Miller and others in Edinburgh, and of Sir William H. Bennett, Mr. Wharton P. Hood and others in London and elsewhere had shown that absolute immobility was not necessary. The following conclusions might be stated. 1. That absolute immobility was not essential to bony union; the slight movement involved in daily massage and in the daily practice of active and passive movements of the adjacent joints seemed to hasten the formation and solidification of the callus. 2. That extravasated blood in joints, muscles, and synovial sheaths led to adhesions as if it were a source of irritation. 3. That the use of massage in the form of stroking and gentle kneading combined with occasional movements was very beneficial not only in hastening union but in aiding absorption of effused blood and serum, and in preventing the formation of adhesions, and in maintaining nutrition of the muscles. By these means the limb was prepared to resume its functions almost as soon as the bones were united. 4. That splints and other retentive apparatus, including extension, were required more to prevent mal-union than non-union and were called for when the weight of the limb or muscular action might lead to bad position. The object of massage, given one or two hours after the accident, was to diminish the swelling, to allay muscular spasm, and to soothe pain after acute symptoms had subsided; massage stimulated circulation in the limb, dispersed accumulations of blood and serum, and maintained the nourishment of muscles, nerves, and soft parts. Massage must be applied without giving the patient pain. Active movements of muscles must be more effective in maintaining the nutrition of muscles and of the limb than passive movements but they were attended with a greater risk of displacing the ends of the bone. Thus passive movement was often permissible at an early stage and would be especially useful in preventing the formation of adhesions between muscles and nerves and the bones at the seat of fracture and within joints and synovial sheaths, while active movements would be of most value in keeping up the nutrition of the soft parts generally. Both forms of movement required to be used with care to avoid displacement of the broken ends of the bone. Splints were required to prevent deformity and to give support during the painful stage. These splints should not constrict the limb or hinder circulation and should not fix the neighbouring joints, so allowing occasional voluntary movements. The long splint should not now be employed in fractures of the femur (except in restless children or delirious adults) because fixation was not necessary and sandbags would prevent rotation. Splints might be of value in giving support as in Colles's fracture. Extension by weights or elastic cords was in some cases indispensable for obtaining apposition of the broken ends as was seen in oblique fracture of the femur where the continuous pull tired out the muscles, relieved spasm, and diminished or completely overcame the over-riding. The mistake often made was in continuing extension too long. It was seldom necessary to apply it for longer than three weeks and usually a much shorter time sufficed. In fracture of the clavicle a more rapid and equally satisfactory result was obtained by the use of the simple sling instead of the cumbrous appliances often used. The elbow might be supported for a few days merely to relieve discomfort but massage and movements of the muscles and joints sufficed to obtain a rapid union. In fractures of the humerus, unless there was great displacement, rest in bed without any appliance for the first few days and daily massage would conduce to early functional restoration. The deformity in a Colles's fracture must be reduced by extension and manipulation and mobility of the wrist and fingers must be conserved by massage and early movement. During the early days support was afforded by a splint and sling. Mr. Cathcart alluded to other fractures which should be treated in this way with advantage to the patient.—Mr. DAVID WALLACE, Mr. ALEXANDER MILES, Mr. J. W. DOWDEN, Mr. A. A. SCOT SKIRVING, Mr. GEORGE L. CHIENE, Dr. J. H. A. LAING, and Dr. A. D. WEBSTER took part in the discussion.

Dr. J. S. FRASER and Dr. J. D. COMRIE communicated a paper on the Naso-pharynx as Infection Carrier in Epidemic Cerebro-spinal Meningitis. Dr. Fraser said that the idea of carrying out this investigation in Leith was suggested to him by reading the papers of Dr. Ludwig Jehle on the Epidemiology of Cerebro-spinal Meningitis. He pointed out that school epidemics were unknown, that second cases in the same house were uncommon, and that cases of cerebro-spinal meningitis, which had been put into scarlet fever or other wards on a wrong diagnosis, did not give rise to further cases in these wards, and, finally, that meningococci were not found in the noses of these other children; he concludes, therefore, that cerebro-spinal meningitis was not like other infectious diseases in its mode of spread and that children might be excluded as infection bearers. On the other hand, he pointed out that coal-mines were good incubators, as in them they had heat, darkness, and moisture—all favourable to the growth of micro-organisms. Miners also made good infection carriers, as they frequently suffered from chronic rhinitis and pharyngitis and were in the habit of constantly hawking and spitting; they also used the same tools and drinking vessels in the mines; on the return of the miner to his home the children might become infected by kissing, using the same drinking vessels, or, in the case of very young children, by crawling about on the floor on which the fathers had expectorated. The table "Orlan-Karivics" showed the cases connected with the 16 shafts of the mine during the months of January till May. Five, eight, and 19 cases occurred in those families in which the fathers worked in certain shafts. The families themselves lived far away from one another, did not know each other, and had no contact with one another. Contact on top of the earth could not be proved. The connexion was, however, quite clear when they considered the mine or shaft; the miners infected one another during their work and carried the germs home to their families. In table "Neumühl" and "Deutscher Kaiser" the cases were divided according to the shafts. In almost all cases the disease affected the children of workmen belonging to one shaft. The

children of other workmen from other shafts remained well though they lived in the neighbourhood of the sick children. With regard to coal mine "Neumühl" with two shafts and coal mine "Deutscher Kaiser" with four shafts, the miners lived in colonies belonging to these mines and also to some extent in private houses. Other workmen also lived in the colonies which were in close contact. The children from various colonies come together at school and play. In January, 1906, 23 cases occurred; the fathers of all of these worked in the Neumühl mine; there were no cases in the Deutscher Kaiser mine. After Feb. 1st, 1906, several miners came from the Neumühl to the Deutscher Kaiser mine and on Feb. 10th the first case occurred in a child of one of the miners of the Deutscher Kaiser. In the Neumühl epidemic the children of fathers working in certain shafts were quite free from disease; from other shafts a few cases occurred; and from others very many. The dwelling houses of the cases were quite separate. It was found that when miners were transferred from uninfected shafts of the Neumühl to the Deutscher Kaiser mine no cases occurred in the latter, but when they came from infected shafts such as No. 15 there was a serious outbreak among the children of the miners of the Deutscher Kaiser shaft to which these infected workmen had gone. The conclusion come to by Dr. Jehle was that in mining districts the coal mines played the same part as the school in the spread of other infectious diseases. With regard to epidemics of cerebro-spinal meningitis in garrisons, prisons, and workhouses the possibility of a naso-pharyngeal infection was not to be excluded; in fact, it was extremely likely. The following seaport towns had been affected by the present epidemic: Glasgow, Belfast, Leith, New York, New Orleans, Boston, Hamburg, Copenhagen, and Antwerp. Other cities have been affected, inland cities, but the number of seaports involved was certainly noteworthy; in regard to this it was at least possible that emigrants played a part in spreading the infection. As to the epidemic in Leith there had been 83 cases up to May 28th, 1907 (53 deaths). The connexion with the docks was very marked indeed, at any rate at the commencement; the social class affected was the lowest one—the casual labourers and their wives and children; the habits of this class as regards cleanliness were well known. He referred to the state of the houses visited, to the conditions under which meals were taken, and to the habit of hawking and spitting. Dr. Fraser suggested that in a ship below decks conditions to some extent resembling those in a coal mine were met with—darkness, moisture, and heat; the presence of coal dust in certain parts must not be forgotten. 80 per cent. of the patients in the Leith epidemic were under 16 years of age; this was just the age at which naso-pharyngeal catarrh was most common in connexion with the presence of adenoid growths in the naso-pharynx. The children themselves did not go down to the docks and if the epidemic had been connected with the docks it was almost certainly through the fathers. The investigation carried out was admittedly incomplete and was by no means free from difficulty. Dr. Fraser and Dr. Comrie had no compulsory powers and the parents and children were often frightened and refused to be examined. The secretion was withdrawn from the naso-pharynx by means of a long sterilised platinum loop, the nostril being dilated by a speculum and the greatest care being taken to avoid touching the speculum or the vestibule of the nose. The secretion was then smeared over the surface of a sloped blood agar or ascites agar tube and the tubes were all placed in the incubator within one hour of being taken. Disappointment was felt at not finding the organism in a higher percentage of the "contacts," especially of the fathers; it must be remembered, however, that only one loopful was taken from each case and probably it would have been better to have examined the fathers, at any rate, on several occasions. Of the 83 cases seven were double cases in one house. With regard to the prophylaxis, the fact that measures of this nature taken in other infectious diseases had proved useless in stopping an epidemic of cerebro-spinal meningitis went far to prove the unusual method of infection in this disease—shutting up the schools, removing the patient to an isolation hospital, and disinfection of the house and contents had practically no influence on the progress of the epidemic. If the theory of naso-pharyngeal infection through the fathers or others was the true one, it pointed to the necessity for isolation of all "contacts" and bacteriological examination of the nose and naso-pharynx. These cavities should subsequently be disinfected with very dilute formalin or with izal, boric lotion, silver nitrate, or potassium permanganate solution, or pyocyanase. Since Dr. Robertson introduced this antiseptic treatment of the "contacts" at Leith there had only been one second case in a family, and Dr. Fraser was informed that this patient was already feeling ill at the time when treatment was commenced. The "contacts" should only be allowed to leave the hospital after their noses had been reported to be free from the meningococcus on two consecutive occasions. The objections to this method of prophylaxis were, first of all, the expense of isolation and examination and probably also of compensation; and, secondly, the tendency to secrecy which such a course might involve.—Dr. COMRIE explained how the cultures were made on blood-film agar or ascitic agar. The meningococcus was found in the naso-pharynx of two out of 13 cases of epidemic cerebro-spinal meningitis examined. This small proportion was probably due to the extreme difficulty of isolating one organism from patients who were extremely ill and whose nasal cavities swarmed with many different forms. The organism was found in the naso-pharynx of ten out of 69 "contacts" with these and other cases. Of these ten five were fathers of the cases, and of the 69 "contacts" 15 were fathers of cases. While the organism was present in 9 per cent. of the mothers, brothers, sisters, and other relatives, it occurred in 33 per cent. of the fathers. Five of the 15 fathers worked in a ship in the dry dock and in exposing Petri dishes containing ascitic agar in various parts of this ship below decks the meningococcus was found in the air of the engine-room. The naso-pharynx was examined in 23 controls who had no evident connexion with the disease and the organism was not found in any of them.

EDINBURGH OBSTETRICAL SOCIETY.

Vaginal Cæsarean Section.—Congenital Goitre after Administration of Potassium Iodide to the Mother.

A MEETING of this society was held on June 12th, Dr. J. W. BALLANTYNE, the President, being in the chair.

Dr. N. T. BREWIS read notes of Six Cases of Vaginal Cæsarean Section. The first patient was operated on for severe and intractable vomiting; she was in the fifth month of pregnancy and owing to the vomiting had been brought to a condition of extreme danger. The operation was performed in the patient's house without any special preparation and was successful in every way. The second patient was seven and a half months pregnant; the urine was loaded with albumin and her feet were swollen. She complained of headache, was stupid, and at times only half conscious, while on the day previous to the operation she was more or less comatose and had only passed a very small quantity of urine which solidified on boiling. At the operation a living child was delivered who survived after much care with the aid of an incubator. The mother recovered after passing through an attack of broncho-pneumonia. Dr. Brewis preferred the operation to that of the classical Cæsarean section as being simpler, safer, and more quickly performed. The operation was performed at full time in the third patient for stenosis of the os following amputation of a hypertrophied cervix. The child was born alive and the mother made a good recovery. The fourth patient suffered from mitral stenosis and incompetence with œdema of the lungs. She suffered greatly from breathlessness with heart pain and insomnia; her condition was very critical. The termination of the pregnancy was urgently indicated and Dührssen's operation was adopted as one calculated to cause the least strain to the heart. The result was most satisfactory, the patient being able to lie down and to rest comfortably on the third day after the operation. The indication in the fifth case was hæmorrhage caused by premature detachment of a portion of a placenta prævia; floodings had occurred at intervals. The patient was about six months pregnant and at the time of the operation was blanched and in a state of extreme weakness. After transfusion was performed vaginal Cæsarean section was done and the uterus was emptied. The patient recovered. The sixth case was one of continuous hæmorrhage in a patient two and a half months pregnant. Though the uterus might have been emptied by other means Dr. Brewis preferred Dührssen's method because it could be carried out more quickly and conveniently than by any other procedure. All the mothers recovered. Dr. Brewis said he considered that whenever the element of time

was of importance vaginal Cæsarean section was a valuable addition to their resources. An operation which enabled them to pass the hand with safety into the interior of the uterus in a couple of minutes was one that might reasonably have its indications extended. It should not be restricted to cases of a serious nature but might be applied to all cases where the operation could accomplish its object more easily and conveniently than any other. It was an operation which appealed strongly to anyone with surgical instincts and those who had had experience of it could not do otherwise than commend it.—Dr. J. LAMOND LACKIE, Dr. J. HAIG FERGUSON, and the PRESIDENT made remarks on the paper, and Dr. BREWIS replied.

Dr. B. P. WATSON read a paper on Congenital Goitre occurring after potassium iodide had been administered to the mother during pregnancy. The mother had suffered from syphilis and had had five miscarriages, two at the third month and three at the seventh month. During the three succeeding pregnancies she was treated with potassium iodide and carried two of the children to full time. The second of the children had at birth a large goitre which gradually decreased in size till the child's death from an intercurrent disease at the age of three and a half months. Histological examination showed the goitre to be of the parenchymatous variety. Four cases were mentioned where congenital goitre followed the administration of potassium iodide to the mother during pregancy and one where both the chlorate and iodide had been given.—The paper was discussed by Dr. JAMES RITCHIE, Dr. H. O. NICHOLSON, Dr. G. KEPPIE PATERSON, Dr. FERGUSON, and the PRESIDENT, and Dr. WATSON replied.

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on June 13th, Mr. W. D. Spanton, the President, being in the chair. The following motion was adopted:—

That we, the Fellows of the British Gynæcological Society, desire to express our feelings of deep regret at the loss the society has sustained through the death of our Honorary President, Dr. Robert Barnes.

Mr. A. W. Mayo Robson gave an address on the Modern Treatment of General Peritonitis and said he wished to bring the subject forward in a general way from the point of view of pelvic as well as of general surgery. He advised early operation and if undertaken within 12 hours of the onset this ought to result in saving the patient; if within 24 hours there was a probability that the patient's life would be saved; but if later there was only a chance of doing so. As short an operation should be done as possible without any damage to the viscera. If the cause were discovered it ought to be removed. Sponging and washing should be avoided but as much pus should be removed as could be done conveniently. After injection of as much fluid as possible either by the rectum or transfusion the patient should be propped up in a sitting posture in order that the septic fluid might gravitate to the lowest part of the abdomen and so be drained away readily. —Sir W. J. Sinclair recommended morphine and large doses of alcohol combined with flushing of the abdomen with saline solution, and considered if puerperal patients were watched and treated well they would not get peritonitis.—Mr. Charles Ryall believed the best form of drainage was by absorption and this was obtained by free action of the bowels.—Dr. Heywood Smith said large doses of calomel gave excellent results in the prevention of peritonitis.—Mr. Alban H. G. Doran said there was a great deal more to be learned about peritonitis and the best principle on which to act was to avoid it. The treatment with opium was of questionable utility.—Dr. Bedford Fenwick found the sitting posture useful when there was a difficulty in getting the bowels to act. He urged the avoidance of drainage and flushing.—Dr. H. M. Macnaughton-Jones advised the application of ice to the abdomen on the first appearance of symptoms. He preferred small doses of calomel to large ones. The most important question was whether the abdomen ought to be opened early or whether the symptoms only should be treated. He advised subclavian or submammary infusion in preference to rectal injections.—Dr. J. H. Dauber considered that the real hope for the future lay in the antitoxin method of treatment.—Dr. W. H. Slimon, Dr. H. Beckett-Overy, and the President also spoke and Mr. Robson replied.

Reviews and Notices of Books.

Alcohol and the Human Body. By Sir VICTOR HORSLEY, F.R.S., &c., and MARY D. STURGE, M.D. Lond. With a Chapter by ARTHUR NEWSHOLME, M.D. Lond., Medical Officer of Health of Brighton. With 14 plates and 21 illustrations in the text. London: Macmillan and Co. 1907. Pp. 370.

THE literature already published in reference to alcohol is so voluminous that it might be doubted whether any new book was necessary or could be expected to settle once and for all this much-debated subject. The prominence recently given to the question in medical circles and the scientific eminence of the principal author of the present work will, however, doubtless secure for it a wide circle of readers. The book is not specially addressed to the medical profession but to the public at large and is commendably free from technical expressions. The descriptions of the cells of the body, of the various tissues, and especially of nervous structures, as well as of the different functions which the organs discharge are given in simple language which the lay reader will have no difficulty in grappling with.

Sir Victor Horsley's views on alcohol are fairly well known; his platform utterances have led most to regard him as an extremist; but in the book before us extravagant language is conspicuous by its absence and its conclusions gain rather than lose thereby. We are, of course, in thorough agreement with those portions of the book which are directed against the misuse rather than the use of alcoholic beverages. There is no truer friend of temperance than the medical man. But the list of ailments due to alcoholic excess may surprise even the medical reader by its length, just as the list of maladies which advertisers proclaim their patent nostrums are good for is also portentously and impressively long. There is no pill which is a universal panacea for all human ills and there is no single cause to which nearly every illness can be attributed. The evils due to excess of alcohol are real and numerous and it is almost a truism to say that the nation's health and morals would improve if the immoderate use of intoxicating liquor was stopped. The change for the better which has already occurred is partly due to the gradual evolution of the moral sense of the people; still, we do not minimise the efforts of the teetotal party. Every great reform has had its enthusiasts and its fanatics. It is often only the fanatic who can obtain the ear of the people; too often they are deaf to the more reasoned voice of the accurate thinkers who can see both sides to a question.

Alcohol is not taken as a food; its combustion in the body may liberate a certain amount of heat and energy, but it is not for this reason that people take it. We may also freely admit that it is a poison and in sufficient doses a dangerous poison. We should not hesitate to prescribe teetotalism to those unable to restrain their appetites, to those who have an inherited or other taint in the direction of want of nervous control, and to those whose limited income should make them hesitate to spend their money in indulgences. But it is a very different thing to recommend universal abstinence from alcoholic drink. The tendency of medical practice has been to lessen materially the employment of alcohol as a drug in recent years; still, we doubt whether many practitioners would care to be altogether without it in emergencies. To expunge alcohol from the Pharmacopœia because it is a poison would be only the first step in excluding many other useful drugs for a precisely similar reason. It is hardly necessary to point out that the use of a poison as a drug is a question of dose and that another factor in its employment is the presence of abnormal conditions of the body. Sir Victor Horsley and Dr. Mary

Sturge see this in reference to other drugs; still it is only in the case of alcohol that they recommend its complete or all but complete disappearance. What they say about tea forms a useful illustration of the logical attitude. On p. 108 they quote with approval from Dr. T. S. Clouston the following sentence: "Its use *in moderate quantity* is not followed by any injurious reaction and is not prejudicial to any of the functions of the body." (The italics are ours.) Again on p. 213 we read: "Tea and coffee were also proved to retard gastric digestion; but the author (Sir W. Roberts) gives no report concerning the effect of those weak infusions of tea which have lately come into vogue, and which are little more than hot water."

It is, of course, both with regard to tea and alcohol a question of dose, the question of what is moderate drinking being the one on which the opponents of Sir Victor Horsley's views will join issue with him. No one wishes to dispute his conclusions regarding the immoderate drinker. It is very difficult to define accurately the word "moderate," and those who have even the slightest tendency to overstep the boundary would be safer if they became abstainers. But to suppose that the man who takes a glass of beer with his lunch or a glass of claret with his dinner is materially injuring his health and morals or shortening his life is contrary to common sense and everyday experience. We find in the chapter which Dr. Newsholme contributes the usual statistical argument derived from insurance offices. Thus we find that of every 100,000 total abstainers 45,000 die before they reach the age of 70 years; and of non-abstainers 56,000 die before that age. Dr. Newsholme admits that the non-abstainers include a proportion of drunkards (and we would add of immoderate drinkers who may not be actually drunkards) and yet he sums up: "We are compelled to conclude that what is commonly described as moderate drinking has a most injurious influence on health and life." Our own conclusion would be that statistics comparing the length of life between abstainers and really moderate drinkers are still lacking.

Some of the arguments directed against moderate drinking savour somewhat of the special pleader; thus the use of the ergographic method of estimating the onset of fatigue is decried because of its uncertainty. The old ergograph of Mosso doubtless lent itself to this objection, but the greatly improved form lately used by Dr. W. H. Rivers, especially when employed on subjects who are totally unaware of what drug they have received, is almost entirely free from the exercise of any bias, intentional or otherwise; it is strange that no reference is made to Dr. Rivers's researches. Kraepelin's work is naturally quoted at some length. This observer showed that small doses of alcohol will diminish the rate at which such operations as arithmetical problems can be performed. The duration of the impairment is estimated by an investigation which showed that the effect of a single dose taken in the evening may persist until the morning and noon of the next day. Kürz's experiments upon himself are also quoted under the heading "Duration of Effect of Small Doses of Alcohol." But this observer consumed 80 grammes (or 100 cubic centimetres) of alcohol in water on 12 consecutive days, and 80 grammes of alcohol measure three and a half ounces, which is equivalent to seven ounces of brandy or one and a half pints of port wine. No wonder that he felt the effects even till the fifth day of abstinence, but this is no argument against moderate drinking.

On p. 214 Chittenden's experiments are referred to. Chittenden found that when the percentage of alcohol in a digestive mixture was as low as 1 or 2 per cent. there was sometimes a slight acceleration of the rate of digestion, and that retardation is not very pronounced until the mixture contains from 5 to 10 per cent. or more of absolute alcohol. The conclusion most people would draw from this is that digestion is not retarded until the ingestion of alcohol has largely exceeded the "moderate" limit. But Sir Victor Horsley and Dr. Sturge draw the sweeping conclusion that all forms of alcoholic beverages seriously retard the chemical process of gastric digestion. They return to this again two pages later, when they say: "Many persons resort to alcoholic drinks at meal times in order that the flow of gastric juice may be increased. Unfortunately, in addition to the moderate increase of secretion of gastric juice a stimulation of the flow of mucus also occurs, which lies like a slime upon the internal surface of the stomach. This mucus is liable to hinder whatever normal absorption occurs from the stomach walls and leads, as aforesaid, to fermentation and production of wind in the stomach." We can imagine such an argument having weight with some people, particularly as it contains words, such as slime and wind, which they can understand, and if it induces a heavy drinker to reform the end may justify the means. We are not, however, acquainted with any researches which have shown that a dose of wine sufficiently moderate to cause an increased flow of gastric juice will produce such an alarming increase of mucus, and still less are we acquainted with the *modus operandi* by which mucus brings about fermentation.

We have been present at teetotal lectures where the lecturer has produced a brain or a liver hardened in spirit like a museum specimen in order to impress upon his audience the terrible effect of alcohol. If the organ had been kept the same length of time in the teetotaler's favourite beverage the effect upon it would have been still more disastrous. On one occasion a lecturer boiled some port wine in a flask and set light to the alcohol which issued from its mouth, saying "that is the terrible stuff you are burning your interior with." It is hardly necessary to say that the present authors do not stoop to follies such as these. We are therefore surprised to find them quoting Dr. J. J. Ridge's well-known unsuccessful attempt to grow cress and geraniums in solutions of alcohol. As well might the anti-water drinker quote Dr. S. Ringer's experiments on the harmful effects of distilled water on micro-organisms and tadpoles. We wonder what would happen to cress and geraniums if an attempt were made to rear them in a solution of caffeine or any other poison. Sir Victor Horsley might retort that caffeine is not tea or coffee, to which we can only reply neither is alcohol the sole constituent of wines, beers, and spirits as usually consumed. The authors certainly protest, and rightfully protest, against the shameful adulterations which are practised in the liquor trade and which have at times been shown to be responsible for effects previously attributed to alcohol but they take no heed at all of the action beneficial or otherwise of the ethers and other substances present in such liquors as old brandy, rum, burgundy, and champagnes.

The book, as we said at the outset, does not really settle the matter, except on points which were previously settled, such as the folly and wickedness of over-indulgence. It only raises the old controversies, sometimes in a way different from that adopted by previous authors, and all we have attempted to do is to point out how slender after all is the evidence that any serious result follows true temperance as opposed to total abstinence.

Text book on Diseases of the Heart. By GRAHAM STEELL, M.D. Edin., F.R.C.P. Lond., Senior Physician to the Manchester Royal Infirmary. Manchester: At the University Press. 1906. Pp. 389. Price 7*s.* 6*d.* net.

THIS volume forms No. VII. of the "Medical Series" published by the University of Manchester and fully maintains the high standard reached by its predecessors. Dr. Steell has aimed at giving an accurate account of the clinical aspect of heart disease, together with a description of the principles of the treatment of the disease. He

has admirably succeeded in his endeavours. The book is published at a time when, as the author remarks in his preface, there is an immediate prospect of a great advance in our knowledge of the anatomy, physiology, and pathology of the heart, which promises to lead to much improvement in the application of available remedies. The lines along which this knowledge has recently progressed, and is likely in the future to progress, are duly indicated, and the work of Dr. James Mackenzie and Professor Wenckebach has been especially drawn upon for the purpose. Dr. Steell very properly awards great credit to Dr. Mackenzie for having demonstrated by mechanical means the nature of movements of the circulatory system, as, without such methods, these matters would have caused endless controversy, an instance in question being the pulsation which occurs in veins.

The portions of this volume which will probably attract the greatest attention are those dealing with mitral regurgitation and mitral stenosis. Dr. Steell adopts a different view in the matter of mitral regurgitation from those hitherto maintained by most writers. His remarks deserve close consideration, as they have an important bearing not only on the pathology of cardiac affections but also on their treatment. He rightly points out that in the case of the mitral valve apparatus a vital contractile element has to be reckoned with. No mitral valves, he says, are competent without the assistance of the heart muscle. Muscle contraction is a necessary complement of the mitral valve apparatus. He then proceeds to argue, and doubtless quite correctly so, that in a very large number of cases of mitral incompetence there is no structural disease of the valves; he maintains that they are rendered incompetent only on account of their failing to receive in the performance of their function the assistance from the heart muscle to which physiologically they are entitled. Further, he reminds his readers that for the perfect function of the mitral valve apparatus muscle contraction is necessary in two ways; it diminishes the orifice to be closed by the valves, and by shortening the musculi papillares it keeps taut the spread-out curtains. Dr. Steell is of opinion that in an "enormous number" of cases of mitral incompetence the incompetence is due to failure of the heart muscle only and is independent of any structural change in the curtains of the valves themselves. He then proceeds to discuss the effects of rheumatic endocarditis, and his conclusions will be found most interesting, though scarcely in accord with the views generally held on that subject. He naturally describes rheumatic endocarditis as being the great source of chronic valvular lesions, but maintains that stenosis of the mitral orifice is the result of such mischief in the majority of cases; in other words, that stenosis of the mitral valve is the principal lesion associated with rheumatism. From what we have stated above as to Dr. Steell's views it is not surprising to find this sentence added: "Mitral incompetence is no necessary indication of mitral disease at all."

It follows from these pathological considerations that if Dr. Steell's arguments are correct the physical signs which are usually taken as being diagnostic of mitral stenosis must be reconsidered. In most text-books it is taught that a systolic murmur heard over the apex of the heart is indicative of mitral regurgitation, whilst an apical diastolic or presystolic murmur indicates mitral stenosis. From a statistical inquiry as to the frequency of the different auscultatory signs of mitral stenosis founded on 60 cases, Dr. Steell found that a "systolic murmur in the mitral area" was the most common murmur, occurring in 75 per cent. A presystolic murmur occurred in only 53·33 per cent. of the cases, whilst a diastolic murmur, audible at the apex and above the apex, occurred in 66·66 per cent. of the cases.

We have perused Dr. Steell's work with much interest and can cordially recommend it as being full not only of original thought but of practical knowledge and utility. He states his views with confidence and this tends to carry conviction to the reader. We believe that he has a sound basis for his arguments and that on pathological, as well as theoretical grounds, there are many who will support him in the views which he advances on cardiac affections, more particularly in connexion with disorders of the valves of the heart.

The work concludes with an "appendix" on "The Volume of the Blood in Relation to Heart Disease," by Dr. J. Lorrain Smith, professor of pathology at the University of Manchester.

The History of the Wine Trade in England. By ANDRÉ L. SIMON, F.R.Hist.S. Vol. I. London: Wyman and Sons, Limited. 1906. Pp. 387.

THE history of wine is very much bound up with the history of nations and it is chiefly this fact, we think, which makes this book interesting reading. The author expresses the belief that if a better knowledge of the history of wine in this country was acquired by the public a greater appreciation of the virtues of wine would be promoted, the more general use of which "would help to check both drunkenness and teetotalism, evils which every fair-minded and temperate man cannot help deploring." We are by no means certain that this view is correct. Nobody wishes to exterminate the teetotaler, because, after all, he is on the safe side and his error is merely zeal, while everybody would like to see sobriety the rule amongst the people. The story does not teach us that sobriety was the rule even before the days of spirituous liquors and, indeed, the classical instances of drunkenness and alcoholic debauchery were of course due to excessive wine-drinking. The teetotal reader who knows his history must realise that wine has on frequent occasions contributed to the gaiety of nations and gaiety in his mind means the prelude to debauchery and wantonness. It seems to us that a knowledge of the history of the wine trade and at the same time of the drinking habits of the people at various times is calculated to furnish him with a justification for his attitude rather than a condemnation of it. On the other hand, the reader who knows already the subtle influence of wine over his mind and body may be led to continue, if he does not increase, his indulgence of it by the fact of his interest being keenly aroused in all that appertains to its history and production. We see, however, and can appreciate the author's meaning. It is not difficult to read between the lines that his view is that wine-drinking—and we must assume that good sound wine is understood—encourages temperance, as against the drinking of ardent spirits. If that is his view we quite agree. It may be called to mind that spirits approach the character of pure alcohol, and unquestionably the purer alcohol is—that is, the more it is dissociated from other things—the more powerful is its physiological effect. It is a very common mistake to suppose that wine is merely a mixture of alcohol and water; it is not so simple. On the other hand, it is a very complex liquid and it is this complexity which profoundly influences or modifies the action of the alcohol contained in it. In speaking therefore of the physiological action of wines we ought to bear in mind that besides alcohol they contain tartaric acid, ethers, glycerine, tannin, and other substances. The effect of alcohol taken, on the one hand, with food and, on the other, on an empty stomach is acknowledged to be different, and surely the presence of acids, ethers, and astringents must modify its action also.

Mr. Simon must have spent a good deal of energy and time in the compilation of the very interesting historic facts contained in his book and we are sure that the work will appeal to a numerous *clientèle*.

LIBRARY TABLE.

A Last Ramble in the Classics. By HUGH E. P. PLATT. Oxford: B. H. Blackwell; London: Simpkin and Marshall. 1906. Pp. 208. Price 3*s.* 6*d.* net.—Readers of Mr. Platt's former delightful little work, "Byways in the Classics," will derive equal pleasure from this his second essay, which, despite the title, we hope will not be the last. Medical men will be particularly interested in this little book, though, unfortunately, they have as a rule but scant leisure to cultivate the classics, and notwithstanding Mr. Platt's rather unkind suggestion that they are prone to display weakness about quantities. But those of our readers who, amid hard work and scanty pay, like the famous coterie in Edinburgh, "Musam tenui meditantur avena," will find charms in Mr. Platt's collection, though the allusions to medical practice in classical times make it appear that the physician and the surgeon were not always the subject of compliment. Martial wrote many rude epigrams upon physicians, and they were not among his best, but Juvenal, in his invective against the "smart set" of his day, is on the side of orthodox medicine when he narrates how the fashionable Roman lady preferred an Egyptian astrologer to the physician. For "astrologer" read "quack," or "hair specialist," or "health culturist," and the same is true to-day. It will be news to many that the Laws of the Twelve Tables, promulgated in 450 B.C. by the Decemvirs, contained a clause in which gold used for stopping a tooth might lawfully be thrown on the funeral pile. This shows how ancient a custom is the stopping of a tooth with gold, and also indicates that gold at that date was very rare among the Romans so that even a minute waste of it had to be legalised specially. It may be remembered that "Byways in the Classics" was made amusing by a selection of "mottoes" or sentences selected from the classics with an eye, and a very humorous eye, upon their application to phases of modern life. The following motto for golfers—and medical golfers are many—may have remained in the recollection of some: "*Miscueruntque herbas et non innoxia verba.*" "A Last Ramble in the Classics" (and again we beg that it may not be the last) contains a further instalment of "mottoes," of which we select the following two for quotation as of special interest to our readers: "For the fee in respect of a fashionable operation—*Appendices maioris muneris.*" "For a country town—*O colonia quae cupis ponte ludere longo!*" The second was sent to Mr. Platt by a medical man, Mr. A. Maude of Westerham. Mr. Platt gives well-earned praise to Mr. E. A. Eade who has suggested various singularly happy applications of the classics, notably the slightly altered Horatian motto for the dripping motor 'bus—"*Cujus odorem olei nequeas perferre ..... Callibus instillat.*" A chapter on melodious verse quotes Dr. Johnson's opinion on the subject. Dr. Johnson chose the fifth line of the first eclogue as an example of the most melodious verse—"*Formosam resonare doces Amaryllida sylvas.*" In our opinion the last line of the same eclogue has a music in it which few other lines, even in Virgil, have: "*Maioresque cadunt altis de montibus umbrae.*" There is a line by one who took Virgil for his master and guide which may fitly stand alongside this, and that is, "*Che paia il giorno pianger che si muore.*" On p. 169 Mr. Platt quotes a curious old Latin puzzle in the form of an epitaph copied from a tomb in Munich. There are, as he says, plenty of similar puzzles and their solution is very easy. We wonder if Mr. Platt has ever exercised his ingenuity upon the well-known sepulchral enigma commencing "Aelia Laelia Crispis." If he has, or if Mr. Eade has, we should like to hear the solution. In the section entitled "Some Questions suggested by Reading the Classics," Mr. Platt raises the point as to how the ancients managed to destroy a body by fire upon the funeral pyre, while it requires in our country, as he says, "an elaborate apparatus and an extraordinary degree of heat to cremate a human body." He has forgotten, we think, to allow for time. It must be remembered that in a modern crematorium a body has to be reduced to ashes in about two hours; hence the elaborate methods; a classical burning might take as long as the operators liked. The pyre of Hector apparently burned for 24 hours. We may point out also, in reference to a quotation from Tibullus, that a cremated bone retains its shape, though it becomes remarkably brittle and light. A body placed on the top of a pile of wood well soaked in oil and lighted from the bottom would soon be consumed—i.e., reduced to bone salts. For the middle of the pile would sink in and allow the body to sink in too, so that it would be "jacketed" with fire. As to the passage Juv. I., 157, a body just frizzled, as is implied by the previous lines, would only be charred superficially and there would be quite enough left to make a "latum sulcum." We owe a debt of gratitude to Mr. Platt for a most interesting little book.

The Principles of Qualitative Analysis. By WILLIAM BÖTTGER, *privat-docent* in the University of Leipzig. Translated with the author's sanction and revised with his coöperation by WILLIAM GABB SMEATON, Instructor in General Chemistry in the University of Michigan. London: Rebman, Limited. 1906. Pp. 300. Price 9*s.* net.—Those who are keeping in touch with the extraordinary developments of chemical science might have anticipated the publication sooner or later of a work on qualitative analysis presented in the light of modern conceptions. The theory of electrolytic dissociation and the law of mass action are constantly in evidence in connexion with the principles of qualitative analysis, and the only scientific method of representing the reactions concerned is by explaining the laws governing these changes. Time was, and not so very long ago, when we were taught simply that on adding hydrochloric acid to silver nitrate a double decomposition took place, a precipitate of silver chloride was formed, and nitric acid would be found in solution. In the light of the dissociation theory the explanation is that first of all silver chloride is composed of the "cation" Ag and the "anion" Cl. This union of "ions" is an insoluble compound, so that if a white precipitate is produced on adding hydrochloric acid to a soluble silver salt—e.g., silver nitrate—the inference is that the "cation" Ag is present. Conversely, if on adding a soluble silver salt to a solution a white precipitate is obtained the presence of the "anion" Cl is demonstrated. Silver nitrate is thus a reagent for the detection of the "anion" Cl, but silver nitrate is not a reagent for the *element* chlorine, since no precipitate is formed when it is added to potassium chlorate and in this case the solution contains the "anion" ClO_3 and not Cl. In short, in the performance of analysis most reactions in solution are reactions of the ions (cathions, positively charged ions, and anions, negatively charged ions), and in so-called double decomposition it is the ions which react and not the molecules. Herein is the scientific method of presenting the principles of analysis upon which this book is chiefly based. It is a beautiful working hypothesis and the author may be congratulated on the way in which he has succeeded in making clear these principles as applied to practical chemistry; moreover, the translator has accomplished his share of the work most creditably. The publication of such a work bids fair to displace entirely the commonplace text-book of analysis of which there is, or was, no end.

Sewage and the Bacterial Purification of Sewage. By SAMUEL RIDEAL, D.Sc. Lond. Third edition. London: The Sanitary Publishing Company, Limited. 1906. Pp. 355. Price 16*s.*—Nearly seven years ago we recognised in these columns the value of this work, and the call for a third edition endorses the view which we then took that

Dr. Rideal's contribution on the subject would be widely appreciated. The work is essentially practical and a guide alike to the chemist and to the engineer. The student will learn from its pages the *rationale* of modern methods for the disposal of sewage, he will realise what an important rôle micro-organisms play in these methods, he will also understand the relations existing between non-pathogenic and pathogenic organisms, and lastly he may acquire a knowledge of those practical chemical and bacteriological methods of analysis the results of which enable us to judge whether a given process is or is not working efficiently. From time to time the Royal Commission on Sewage Disposal has issued valuable interim reports but its final report which, it may be anticipated, will settle many questions of great importance to local authorities has not yet been issued. Dr. Rideal has taken advantage in the third edition of his book of the further experience which has been gained in regard to the bacterial methods of sewage purification during recent years, and this experience obviously includes the important conclusions of the Royal Commission so far as they have been published. This alone is a valuable feature of the book. It is to be hoped that every facility will soon be afforded to local authorities to enable them to develop methods of sewage disposal along the scientific lines indicated by recent developments. Dr. Rideal may be thanked for keeping his readers in touch with these developments and for the share which he has taken in helping to bring about a desirable consummation.

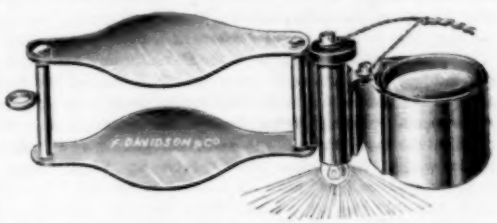
JOURNALS AND MAGAZINES.

The Journal of Nervous and Mental Diseases (April and May).—These numbers contain amongst other matter an interesting article on the Diagnostic Value of Lumbar Puncture in Psychiatry by Dr. J. L. Pomeroy, of Ward's Island, New York City. In making his investigation the method of technique described by Widal and Ravant was followed as closely as possible. In addition to this examination for lymphocytosis Dr. Pomeroy also advises that the albumin test should be made, as a case may show a positive albumin content even before lymphocytosis is discovered. He goes on to say that the usual presence of a large albumin content in general paralysis is of value and he advises caution in interpreting small augmentation of cells without previously examining the amount of albumin. He points out the diagnostic value of lumbar puncture in cases of congenital syphilis in which there is arrested development. On the other hand, he considers that a negative finding in a case with a syphilitic history is almost certain evidence that there is no involvement of the central nervous tissue, and in cases where syphilis of the brain is clinically to be diagnosed a persistent negative lumbar puncture should make the observer look for some other etiological factor. The figures that he gives of the results of spinal puncture in cases of paresis are as follows: in 30 undoubtedly clear cases (clinically), in every instance positive results were obtained and the albumin content showed a marked opalescence in every examination. In all cases the pressure was quite marked, the fluid spurting from the canal. Dr. Pomeroy considers that lymphocytosis is one of the earliest and most constant signs of paresis, and, according to Jaffroy, Marie, and Dufios, it appears before amnesic, ophthalmic, or ataxic symptoms. Further, the importance of repeated puncture is emphasised by Archard who records a case in which the first two punctures were negative, a third showed slight cellular increase, and finally a fourth gave a large number of lymphocytes. In this case an interval of ten days was allowed between each puncture. Dr. Pomeroy also alludes to the value of lumbar puncture in assisting the diagnosis in those difficult cases of chronic alcoholism in which there has been a previous history of syphilis. The article is concluded in the May number of the journal and after giving several more instances of the value of lumbar puncture from the diagnostic standpoint Dr. Pomeroy sums up his results as follows: 1. Lumbar puncture should not be resorted to unless the patient can be put to bed. 2. To be of definite value the procedure must be repeated two or more times at an interval of at least ten days. 3. A constant negative finding is of more value than a positive one, for it rules out the presence of syphilis of the brain and parasyphilitic conditions. 4. In general paralysis the lymphocytosis is a constant and early sign and is usually associated with a heightened albumin content. The same may be said of tabes dorsalis. 5. Lymphocytosis may occur in secondary and tertiary syphilis without clinical evidences of involvement of the nervous system. As a rule the cellular increase in such cases is far less than that observed in paresis and there is very little increase of albumin. 6. In arterio-sclerotic insanity a positive finding points to a syphilitic process, such as softened foci following specific arterial disease. 7. Epilepsy shows negative findings. 8. Alcoholism in all its varieties gives negative results—that is, when apart from syphilitic lesions. 9. A differential diagnosis is to be made between abscess of the brain and meningitis by the presence in the latter of increased cellular material. 10. It cannot be enough emphasised that the lymphocytosis is merely a symptom, and that only after consideration of all other symptoms of the disease should it be used to construe the case.

New Inventions.

AN ACHROMATIC ILLUMINATOR.

THE achromatic lens is often indispensable for examining the cornea, corneal surface, and iris, but the difficulty is that both hands are required to be employed in so doing, one in holding the lens and the other in supporting a focussing lens for condensing the light from a lamp. With the assistance of Mr. Davidson, optician, of 29, Great Portland-street, W., I have been enabled to overcome this difficulty by the introduction of an electric light attachment to the achromatic lens, by which one hand is left free to carry out the necessary manipulations of the lids while the examination is being conducted. The little appliance I have found a pleasure to use. The apparatus consists of an achromatic lens of about half an inch focus fixed in a metal clip, attached to which is the lamp-holder.



The current is controlled by means of a spring, by the pressure of which the light comes into use. The object of this arrangement is to prevent the waste of current when the lamp is not required. The lamp is of four volts and is screwed into the holder; it can therefore be easily replaced when either broken or fused. A dry battery is supplied which will probably last with intermittent use upwards of six months. The appliances can also be fitted with eight and 12-volt lamps for use with various accumulators and even with the ordinary house current by means of special adaptors which Mr. Davidson has designed and introduced. The whole appliance is contained in a small leather-covered box at a moderate cost. PERCY DUNN, F.R.C.S. Eng.

THE LANCET.

LONDON: SATURDAY, JUNE 22, 1907.

The Royal Society of Medicine.

A MEETING of representatives of the various bodies taking part in the union of the London Medical Societies was held on June 14th, when the Royal Charter was adopted incorporating the 15 societies in question into the Royal Society of Medicine. Following this was the acceptance of a code of by-laws which had been prepared by the committee of representatives, and then the officers and the members of the council were elected. Although the labours of those who have during the past two years been engaged in devising an efficient scheme of amalgamation have not been crowned with complete success, yet they are heartily to be congratulated on having united no less than 8000 Fellows and members into a compact and influential body. A consideration of the history of previous attempts to form in London a corporate society of the medical sciences shows that the committee which undertook this endeavour had to face no light task. Sir WILLIAM S. CHURCH'S account of these attempts when the present scheme was first officially and publicly discussed in 1905 was full and interesting, and while referring our readers to his words [1] we will content ourselves with repeating that in the years 1808, 1850, 1860, 1867, and 1870 efforts were made to form an amalgamation based in every instance on an alliance between the Medical Society of London and the Royal Medical and Chirurgical Society, save in 1850 when the latter body was approached by the Pathological Society for a like purpose. The fruitless issue of all these attempts finds some reflection in the present qualified success, for the Medical Society of London and some other societies unfortunately have elected to remain distinct from the new scientific union. We feel it to be a matter of regret that the doyen of all the London societies has not seen its way to throw in its lot with its brethren, all of whom may be younger but some of whom are quite respectably ancient. However, the Royal Medical and Chirurgical Society having a full warrant to stand as representative for both of the two greater branches of the profession was able to form the foundation-stone of the new edifice, and the debt under which the medical profession is placed to this powerful body is a very great one, for the financial organisation of the new society rests to a great extent on that of its predominant partner. In emphasising this point we do not wish to cast any disparagement on the equally public-spirited action of the other constituent societies which we need not here enumerate; on the contrary, the self-denying ordinance by which they have forfeited their individuality *pro bono publico* must have the sincere commendation of all who have at heart the best interests of the advancement of medical science in England.

[1] THE LANCET, April 15th, 1905, p. 1020.

It is gratifying to know that in the administration of the Royal Society of Medicine as much autonomy will be given to its constituent branches as is compatible with the compact and harmonious working of the whole body—this much is certainly due to the bodies which have undergone a voluntary absorption; although the actual labour involved in the administration of any branch will probably be less than when it had an independent existence, it would be regrettable if the officials responsible for its conduct were to lose that stimulus to a personal interest in its welfare that has been so prominent a feature of the societies as they existed before the amalgamation. It is just this personal touch, this active interest vivifying the many members of the body, that is essential to the due performance of the important functions that are for the mutual advantage of all, and which will prevent the work of so large an organisation from sinking into a level of official routine. Life is essential to progress and there must be a vital activity permeating the whole system if the best results are to spring from it, and these results will be attained by sectional officials, whilst sharing in the corporate interests of the whole society, maintaining their full zeal for the work of their own special branches.

Although, as we have said, the societies as such have made some sacrifice in forfeiting their independence, for their individual members the union should be an unqualified gain. It is not only that they will be admitted to participation in a wider sphere of professional interest for a considerably less total subscription than would have been demanded of them before had they belonged to several of the societies, but the saving in time to them will be a signal advantage amongst the many conveniences that will follow on the gathering of the various societies under one roof. The value of the libraries will increase by amalgamation, and the compactness of administration now possible will save an overlapping of interests in the different sections. But whilst each section will be concerned with its own business chiefly, the great advantage that will accrue to the members generally lies in the additional facilities which they will enjoy for following the proceedings of other branches both personally and by means of the Society's journal; it is above all things in the combination of interests of those branches of medicine that tend each year to become so specialised as to lose touch with medicine as a whole that we confidently predict will be found the chief justification for the institution of the latest of all the Royal Societies and the chief warrant for its success. *Floreat.*

Hospitals and Provident Dispensaries.

A CONFERENCE representative of the provident dispensaries of London was recently held at the residence of Mr. FRANCIS BUXTON, its object being the discussion of possible plans for closer coöperation between provident dispensaries, the hospitals, the medical profession, and the three great hospital funds. The dispensaries represented were Battersea, Blackfriars, Brompton, Chelsea, Deptford, East Dulwich, Greenwich, Hackney, Kennington, Kensal Town, Kilburn, Lewisham, Notting Hill, Paddington, St. John's Wood, Streatham, Tottenham, Wandsworth Common,

Wandsworth Medical Aid, Westbourne Park, Western, West Ham, Whitechapel, Woolwich, and the Provident Department of the Metropolitan Hospital. Members of the council of the Metropolitan Provident Medical Association, of which Mr. BUXTON is chairman, were also present. The following resolution was adopted on the motion of Sir WILLIAM BOUSFIELD, seconded by Mr. HARRY J. POWELL:—

"That coöperation between all the provident dispensaries of London is desirable, whereby their aims and work may be advanced, reciprocal action between them and hospitals be promoted, and the transference of members from one dispensary to another be made more general."

A provisional committee, consisting of Sir WILLIAM BOUSFIELD, Mr. FRANCIS BUXTON, Sir EDWARD BRABROOK, Mr. CARLTON LAMBERT, Colonel MONTEFIORE, Mr. H. J. POWELL, and Dr. W. WINSLOW HALL, with a representative to be chosen by the Metropolitan Branch of the British Medical Association, was elected to carry out the objects of the resolution and to arrange for the appointment of a consultative council representative of all the provident dispensaries of London.

The provisional committee thus appointed will be engaged upon a work which has the sympathy of all who take interest in the welfare of the sick poor or who appreciate how far the various social and economical difficulties generally classed together under the head of hospital abuse are due to an absolute ignorance upon the part of the public of the proper place which the hospital, the dispensary, the infirmary, and the private surgery are designed to play in the relief of sickness, disease, and accident. There should be no better barrier between hospital out-patient departments and those for whom the services of these departments are not properly intended than the provident dispensary, and the more thoughtful of the medical men who have considered the problem presented by the glut of hospital out-patients regard the development of the dispensary system as the proper remedy for existing troubles. Medical men in the neighbourhoods where provident dispensaries exist know well enough how valuable they are and with what success they supply advice and treatment to just that class of person for whom the hospital out-patient department is not the proper place and who yet cannot be expected to pay ordinary medical fees. In the administration of the provident dispensary there is possible that local and individual discrimination without which charitable work can never be justly and effectively carried out. There is, moreover, in the vast majority of instances that desirable adaptation of means to an end which arises from the free intermingling of medical and lay opinion and endeavour. The field for provident dispensaries properly conducted is a very wide one. The public is taught by the services received at the dispensaries to regard the family practitioner as the first source of help. It is hard for the hospital authorities to prevent overcrowding, to weed out those who are not from those who are the proper recipients of advice and treatment for nothing in the case of illness not serious enough to demand admission to the hospital. The discrimination must come, so to speak, at the other end. The public must be taught that the out-patient department is the poor man's consulting-room, and the poor man's only. Those who are less poor must learn to visit a provident dispensary to which they subscribe or, better still, their own private medical man. Just where to draw the line between the three classes of individuals must always be a difficult matter and one permitting many errors. Almost any arrangement, however, must be better than the chaos which now exists, when the line is drawn nowhere and when the private practitioner sees his patients leaving him for an out-patient department at the doors of which they are deposited by their own horse and carriage. Such a case, though true, is of course an extreme. Yet such extremes are only possible when the existing system admits of very numerous minor flagrancies. Reciprocal action between hospitals and dispensaries, one of the objects aimed at by the provisional committee, may do much to prevent abuses of charity of this description. There is, as our readers are well aware, no problem more difficult of solution in connexion with medical charity than this question of abuse of out-patient departments. Nor, we feel sure, is there any miscarriage of charity which cries out more urgently for reform by reason of its prevalence. The harm which is done by the misuse of out-patient departments is not limited to the appropriation by the comparatively well-to-do of funds subscribed by charitable persons for the use of the extremely poor. It is not merely that the subscribers to hospitals are helping those for whom they did not intend their subscriptions but there is also to be considered the injury to the cause of medical science. What is the use, from the point of view of medical progress, of out-patient departments as they at present exist? What chance is there for genuine scientific work of any kind when physicians and surgeons are dealing with an overwhelming horde that has to be "seen" and treated somehow? The very idea of work of any kind, apart from the most rapid diagnosis, a little teaching, and the promptest treatment, is almost preposterous at the present time in connexion with the out-patient departments of London hospitals.

Several possible remedies suggest themselves for this deplorable condition of affairs. One, at any rate, worthy of all consideration and trial is to be found in thorough coöperation between provident dispensaries and the hospitals of their neighbourhood. For provident dispensaries to take the place, as there is no doubt they ought largely to do, of the out-patient departments of hospitals there may be necessary some increase in their number. In this direction it would be wise, we imagine, to move with extreme caution, for part of the very trouble to be treated arises from the existence of an excessive opportunity for gratuitous medical assistance. It would probably be found, however, that the chief fault in this respect lies not so much in superfluity but in lack of proper distribution. Some localities are undoubtedly oversupplied with medical charity, whilst there are others where the really poor find it hard to obtain the help that the philanthropic would wish to proffer them. Again, if provident dispensaries are to supply the amount of help which we think should be in their hands it will be necessary to standardise their methods to an extent which does not prevail at the present time. Some change of this kind would obviously be included in that part of the resolution which we give at the beginning of this article which refers to the transference of patients from one dispensary to

another. In the matter of medical service there would, we anticipate, be no difficulty at all. The dispensary staffs could be enlarged at once, wherever it was thought necessary, by simple request. Medical men have never been found backward in giving their services to charitable institutions. Indeed, a little less generosity in this respect would but help in adjusting the scales. The terms of the resolution, in which it is desired that while the aims and work of the dispensaries may be promoted so also may reciprocal action between them and the hospitals, h ow that those who moved this resolution are fully alive to the importance of relieving hospital abuse. It could not be maintained for a moment, we think, that there is too little charitable effort in London with regard to the sick poor. Only it is to a large extent misdirected and badly administered. Obviously, then, if the amount of help is not to be increased, and we do not believe it needs increase, and at the same time one kind of help, that by provident dispensaries, is to be extended, retrenchment must be practised in another quarter. That quarter is, as we have sought to indicate, the out-patient departments of hospitals. One of the most recent general hospitals in Greater London, we allude to the Hampstead Hospital, will have an opportunity of leading the way in proper action with regard to this matter. Hampstead owns one or more dispensaries, and some, at any rate, of the local practitioners believe that there is no need for any out-patient department at all to the hospital. We offer no opinion on this particular case but mention Hampstead as one example of the many in which we hope to see beneficial results from the resolution which we quoted above. The *personnel* of the provisional committee gives us good hope that practical steps will be the outcome of its deliberations and an assurance that such steps will be to some extent in the much-needed direction of relieving hospital abuse in out-patient departments.

Clifford v. Timms; Clifford v. Phillips; Hill v. Clifford.

HOWEVER irksome the law's delays may sometimes be to suitors four and a half months have sufficed to bring to a hearing the appeal against Mr. JUSTICE WARRINGTON'S judgment in the above cases and the result of the appeal has been that which was predicted tentatively in THE LANCET of Feb. 9th. In the circumstances we then confined ourselves to a brief statement of the principal points in his lordship's judgment which struck us as being most open to question, and if we felt confident that the judgment would be reversed we were content with hinting at an opinion which has now been justified. A more full statement of the interesting legal points involved will be found in another column (see p. 1732), but we may note serviceably here some of the main features. Certain partnership deeds entered into by one or the other of two brothers, R. E. CLIFFORD and ISIDORE CLIFFORD, with the three other parties to the litigation contained clauses which provided in similar, if not in identical, terms that "if either partner shall at any time during the continuance of the partnership be guilty of professional misconduct or of any act which is calculated to bring discredit upon or injure the other partner or the partnership business, the other partner shall be at liberty to give notice in writing of his intention to determine the partnership, and the partnership shall be dissolved and wound up under the provision of these presents in the same manner as if the offending partner had died on the day of such notice.' The CLIFFORDS were found guilty of "infamous or disgraceful conduct in a professional sense" by the General Medical Council in the usual way, and under the provisions of the Dentists Act, 1878, were struck off the Dentists Register. The question to be decided by Mr. Justice WARRINGTON arose out of the resolve of the brothers CLIFFORD to dispute the rights of their respective partners to terminate the partnership agreements on the ground that the General Medical Council had found the CLIFFORDS guilty of professional misconduct. Mr. Justice WARRINGTON, in a considered judgment, questioned the admissibility of the General Medical Council's order and of the report of the Dental Committee upon which that order was founded, and, further, drew an ingenious and not wholly comprehensible distinction between "professional misconduct" (the term used by Mr. TIMMS in giving notice to terminate the partnership in his case) and the "infamous or disgraceful conduct in a professional sense," which formed the ground of the removal of the CLIFFORDS from the Dental Register. The Court of Appeal, in dealing with these points, delivered long and exhaustive judgments, but for our present purpose it is sufficient to refer to the words quoted elsewhere of the Master of the Rolls, who held that the order of the General Medical Council was evidence, as a "judgment *in rem*." His lordship further thought that "it was idle for a man who in the language of section 13 of the Act of 1878 has been guilty of 'disgraceful conduct in a professional respect' to contend that he has not been guilty of 'professional misconduct.'"

With these conclusions it would be difficult not to agree, and they dispose of a judgment which, had it been upheld, would have caused a precedent to be established of an extremely inconvenient character and one which put an artificial misconstruction upon more or less plain words used in a matter appertaining to their own profession by men who were not lawyers, with a clear intention to provide against contingencies familiar to them. As it is, in spite of passages in the judgment of the Master of the Rolls which seem to justify the view that removal of the name of one of two medical partners from the register would, *ipso facto*, terminate the partnership, we suggest, as we did in our leading article of Feb. 9th, that any clause in a partnership such as we have quoted above should contain special reference to the possible action of the General Medical Council, as well as such other general descriptions of acts injurious to the partnership business as may be thought desirable. We suggest, in short, that it should be expressly agreed in all cases that the fact of a partner's name ceasing to be upon the Medical or Dental Register should put an end to his partnership *ipso facto* and without any notice being given to him as provided in the cases of the CLIFFORDS.

It is of some interest to note that a peculiar feature in the partnerships which gave rise to the appeal upon which we

have commented, or in one of them, was introduced by a proviso that on the death of the partner of the named CLIFFORD his brother was to step into his shoes. Therefore, as the dissolution through unprofessional conduct was to have the same effect as the death of the offending partner, it would also introduce his brother in his place. Clauses capable of producing such possibly inconvenient results require consideration before the deed containing them is signed. Other features peculiar to the cases of the CLIFFORDS, such as the fact that Mr. PHILLIPS, a party in one of them, had entered into partnership with one of the CLIFFORDS without being himself on the Dentists Register, were dealt with in the judgments delivered in the Court of Appeal, but do not affect the question, which was certainly one of interest to the medical and dental professions at large, whether a professional man might be saddled against his will with a partner unable to carry on the business of the partnership, in spite of a clause in the partnership deed obviously drawn with no other intention than to prevent such an occurrence.

Annotations.

"Ne quid nimis."

AN ACT TO MAKE THINGS WHAT THEY SEEM.

SURELY the time has come when room should be found in our legislative machinery for an Act which shall be applied to articles other than foods and drugs yet which could be administered in much the same way as is the Sale of Food and Drugs Act. It is brought home to us almost every day that the public is imposed upon not merely in regard to articles of food and drink but in regard also to articles of clothing and other materials. The local authorities, we suggest, should be possessed with powers to apply in a practical manner the provisions of the Merchandise Marks Act or a similar measure. The public is not very adequately protected against such substitutions as cardboard being sold as leather, cotton as wool or silk or flannel, celluloid or bone as ivory, and a host of other things which are not what they seem. The evidence of chemical analysis is hardly wanted in such cases and a staff of analytical chemists would not be indispensable for the administration of such an Act, though it must be admitted that experts, or at least a body of intelligent men, would have to be appointed who could discriminate at a glance the genuine from the false in such cases as are quoted above. We know that there are such men and the various trades concerned know it also and competent inspectors could be drawn from their ranks. The subject is not outside our province, for many such substitutions as we have mentioned are intimately associated with questions of health. The boot, for example, which is not made of leather but is what might aptly be described as a cardboard sandwich—that is to say, contains slices of cardboard inserted in the sole—does not secure that protection against weather which the wearer expects from it. He is not only deceived but his health may be unfavourably affected by wearing boots which fail to guard him from the effects of wet and cold because they are not made entirely of the weather-proof material which good leather is. He might as well look for relief in a belladonna plaster which contains no belladonna. In that case, however, he is protected, or at least means of protection are provided in the shape of the Sale of Food and Drugs Act. Again, health might easily be injured by the wearing of a material loaded with mineral substances, amongst them being in all likelihood some of a distinctly poisonous or irritating nature. A person is protected against the possibility of poisons getting into, or being used in, his food so far as human efforts can go. For here once more the Sale of Food and Drugs Act exists to operate in the interest of his health and well-being. Then is it unreasonable to demand that he should be protected equally in regard to other things which are essential to his comfort and well-being?

THE CONFLICT OF HEREDITY AND ENVIRONMENT.

A THOUGHTFUL paper on the subject of Heredity and Environment Relative to Man was read before the May Chapter of the Guild of St. Luke by Surgeon-Colonel F. H. Welch, F.R.C.S. Eng., in which he traversed a considerable range of ground of an enormous speculative territory, concluding with a brief diversion into the thorny paths of the freewill controversy. His object was to show the vast importance of his subject in its bearing on the general status and the progressive development or retrogression of the individual and the race, and to study the manner in which we may best apply its lessons to the sphere of practical politics. In considering the influence of heredity on the organism he echoes a slight protest against the modern scientific consensus of opinion that so strongly supports the non-inheritance of acquired characteristics, although he carefully avoids dogmatism on either side, a state of mind to which the present condition of physical science may well incline the seeker after truth. He does not consider that in the present state of educational development there are sufficient individual altruism and national conscience to make practicable the proposal to regulate our social ills by a system of compulsory "Eugenics," and, indeed, he repeats the uncomfortable observation that, considering heredity alone, our increased care for the lives of the children of the less favoured classes seems to clash with the method of evolution by natural selection, whilst no artificial selection is yet available to replace it. But a more hopeful note is sounded when he turns to consider environment, and in this he sees the weapon of salvation for the race that evolution of intellect has given us, but he deprecates the national reluctance to wield it vigorously against the dragon of degenerative tendencies. In pointing out the enormous control that environment can have over hereditary tendencies, he instances the astonishing work of Robert Owen for 26 years in New Lanark. That philanthropist at the beginning of the last century grasped this principle of improvement and thereby redeemed from utter social degradation a community of 2500 persons, without recourse in any case to legal punishment; like excellent results of attention to environment may be seen in the Barnardo homes to-day, and the educated portion of the community may well put to itself Surgeon-Colonel Welch's trenchant questions on the side of environment, as to what means commensurate to the needs are in operation to curtail the deteriorating influence of town life with its overcrowding on the physique and stamina of our urban population; to give through a sufficiency of decent room-accommodation the chance of the growth of modesty and continence among the young of both sexes; to abolish the superadded temptations to incontinence through the facilities from open solicitation in the streets; to provide institutes and wholesome recreation for men and boys and girls as counterpoise to the poor home, the beershop, and the vicious teachings of the streets; to train up our rising youth and adults to a sense of patriotism and of what duty demands towards preparing themselves to defend their country and homes against outside aggressors; and to foster the religious sentiment by agencies and ways sufficient in amount and right in character. We are in

accordance with the author of these words in his contention that it is the paramount duty of the race to search out by all means and to apply in every way the right methods of improving the environment of its units, for if we are to sit down impotently under the incubus of heredity and submit as did the doomed Greek family to its Ate, then, indeed, must we consider the purpose of existence to be in vain. It is in the control of heredity by self-planned environment that the true freedom of man will surely stand manifest.

WEIGERT'S LIFE AND WORK.

AN interesting biographical sketch of the life and work of Carl Weigert has recently been published in Germany by Professor Robert Rieder[1] of Bonn. The great contributions made by Weigert to pathological anatomy and histology, to general pathology, bacteriology, neurology, and to the technique of microscopical methods are considered in detail, while the influence which he exerted upon the medical sciences is carefully outlined. Professor Rieder shows a genuine affection and a profound admiration for the subject of his sketch and presents in comparatively few but well-chosen words an attractive picture of the personality of Weigert whose single-minded devotion to science, untiring persistence in perfecting the methods which he introduced, and striking originality combined to render him one of the greatest investigators of his time. These brilliant gifts were associated with a nature of almost childlike simplicity but at once so pleasing and loveable that Weigert possessed countless friends and admirers. Weigert was born in Silesia in 1845 of Jewish parentage and after his student career was completed acted as assistant to Waldeyer in Breslau from 1868 to 1870, leaving to serve as an army surgeon in the Franco-Prussian war. On his return to civil life he was assistant to Lebert from 1871 to 1873, becoming assistant to Cohnheim in Breslau in the following year. In 1878 he went with Cohnheim to Leipzig and became extraordinary professor of pathological anatomy. After the death of Cohnheim in 1884 Weigert resigned this post and spent the rest of his life at the Senckenburg Institute at Frankfort-on-the-Main, of which he was director. Professor Rieder is righteously indignant that Weigert never received a "call" to the professorship at any of the great universities and asks if pathological anatomists of his calibre were so plentiful in Germany that there was no room for him; but we may agree with Professor Rieder that science was the gainer by this, for Weigert's great energies were free to be devoted to research and to the instruction of those who visited his laboratory, comprising representatives from almost every civilised nation. His work was so peculiarly his own, so truly scientific, that it may be doubted whether, even in his own country, the great significance and value of his work are even yet fully recognised, for his papers were mostly published in scientific journals or transactions, were often highly technical, and were the outcome in many cases of years of persistent labour. His method for staining the white substance of the nerve fibres represented three years' diligent work, while he studied his neuroglia method for 17 years before he published his results, in spite of the earnest advice of well-meaning friends that he should record some of his observations. This singular pertinacity and whole-hearted devotion appear to have been strikingly characteristic of the man. His fame might, perhaps, have been more public if he had published a text-book, but as he was wont half jestingly to say, "They are too full of other people's wisdom." Weigert was essentially an investigator, as a study of the list of 97 papers published by him shows. His work was too comprehensive in its scope to admit of more than passing reference here, but it may be remembered that, in addition to his extensive researches on histological subjects, he was the first to apply differential staining methods to bacteria and to stain them in sections of hardened tissues, while Koch has borne testimony to the assistance afforded to him in his researches by Weigert's discoveries. Among other pathological studies we may also refer to those on the eruption of small-pox, the exudate of diphtheria, the process of coagulation necrosis, the phenomena of inflammation, and the primary tissue degenerations. Appended to this biographical sketch are two short appreciations, one by Professor Edinger on Weigert's services to neurology, in which the state of histological research in regard to the nervous system before the introduction of the methods of Weigert is described, and another by Professor Paul Ehrlich on Weigert's contributions to histological science, which concludes with the striking tribute, "He has yielded us not only methods but a system." Professor Rieder's book affords an interesting character sketch of a great personality as well as a valuable summary of his contributions to science and the book should be read with great profit by all who are interested in the advances made in medical science in the nineteenth century.

[1] Carl Weigert und seine Bedeutung für die Medizinische Wissenschaft unserer Zeit. Eine biographische Skizze von Dr. Robert Rieder. Berlin: Julius Springer. 1906. Pp. 141. Price 3 marks. (Carl Weigert and his Influence on the Medical Science of Our Times, a Biographical Sketch by Dr. Robert Rieder.)

THE ANTIGONE AT BRADFIELD COLLEGE.

DURING the last two weeks the triennial Greek play has been performed in the beautiful model theatre built 17 years ago in the chalk-pit at Bradfield College. It hardly falls within the function of a medical journal to offer a detailed criticism on either the acting or the significance of the Antigone although the clashing of interests of the individual and the State is not without parallel in the experiences of modern medicine. From a medical point of view the acting of Mr F. R. Barry as Teiresias was conspicuous, as he really did convey the effect of being blind as well as of being a very disagreeable old gentleman, whilst Haemon made a most realistic "corpse," far more so than that of the ill-starred queen. The acting of Mr. C. B. Eddison as Antigone, Mr. A. G. R. Garrod in the exacting part of Creon, and Mr. G. R. Hamilton as First Messenger was extraordinarily good and their enunciation would have done credit to a London stage. Creon shone most in his spirited quarrel scenes, and Antigone found a representative who gave full value to the dignity and sweetness of a character only matched by our Shakespeare's heroines. The choric dancing and chanting were always interesting, and the orchestra with ancient "flutes" and lyres contributed much to the success of the play. The talent displayed by the Warden in taking the part of the Coryphaeus at a day's notice was very noteworthy, his statuesque poses giving a truly Greek stamp to a dramatically effective rendering of the part. An English verse translation of the play by the sixth form contained many strong passages. The arrangements for the transport and refreshment of the guests were as perfectly organised as they could be and enhanced the enjoyment of a memorable production.

BRASS-FOUNDERS' AGUE.

THE inhalation of fumes arising during the casting of brass was known many years ago to produce a disease called brass-founders' ague. The question was debated for a long time as to whether the injurious agent was copper or zinc, but it appears to be concluded now that zinc is the chief factor, Moreover, zinc oxide is much more readily volatilised than is copper oxide. The symptoms are described as tightness and oppression of the chest with indefinite nervous sensations followed by shivering and profuse sweating. The

Home Office has recently issued a circular in which it is pointed out that certain regulations should be observed in connexion with brass-founding. Thus it is proposed that the pouring of brass should be prohibited unless there be (*a*) an efficient exhaust draught for the removal of the fumes at, or as near as possible to, the point of origin, and (*b*) efficient arrangements to prevent the fumes from entering any room or factory in which work is carried on, and (*c*) free openings to the outside air in the upper part of the room. Provisions are also laid down for the maintenance of a lavatory supplied with warm water, soap, nail brushes, and so forth. Females are not allowed to work in any process whatever in which the pouring of brass is carried on. The regulations have been prepared after careful inquiries, extending over a period of several years, into the condition of the industry and the working of special rules, with the result that it has been shown that these rules do not adequately provide for the protection of the workers and that further precautions are necessary. As will be seen, the most important proposal in the regulations is the requirement of efficient means to remove the fumes which are the chief source of injury to the health of those engaged in the casting shops. A system of exhaust ventilation is therefore indicated and demanded. The regulations just issued are subject to further consideration and objections may be lodged by occupiers or the workpeople themselves with the Secretary of State within 40 days from the date of the circular, which is June 14th.

"INFANT CONSULTATIONS" AT THE ST. MARYLEBONE GENERAL DISPENSARY.

WE have received the report of the first year's working of the new scheme for preserving infant life which is on trial at the St. Marylebone General Dispensary. During the 12 months which are covered by this report 98 babies were taken to the "consultations" and of this number 58 attended regularly, 21 irregularly, and 19 were taken only once for examination. The progress of the babies who attended regularly is stated in the report to have been highly satisfactory in 16 cases, satisfactory in 30, and unsatisfactory in 12. Only two deaths have been recorded during the year, a result which may be considered extremely good in view of the fact that the greater proportion of the infants sent to the "consultations" were the difficult or intractable cases met with by the health visitors of the St. Marylebone Health Society in the course of its work. The report further states that "up to the present the experience gained at the 'consultations' shows that with careful instruction and subsequent supervision there is no pressing necessity to provide free allowances of sterilised milk or of milk otherwise prepared. It is found that other than breast-fed cases do excellently when the mothers are left to obtain the milk through the ordinary commercial channels." From an educational standpoint and on sociological and economic grounds this may be considered an improvement on methods which depend on the principle of free distribution, for such methods offer a premium on bottle-feeding and tend to diminish the parental sense of responsibility. We are asked to give notice that a public meeting will be held in connexion with the above scheme on July 2nd at the Portman Rooms, Baker-street, W., at 4 o'clock. At this meeting the chair will be taken by Lord Robert Cecil who is promoting a Bill in Parliament for the Early Notification of Births and who takes a great interest in all measures which aim at checking infant mortality. The prizes which have been offered by various individuals interested in the scheme will be distributed by the Duchess of Sutherland among the mothers who have successfully carried out the instructions given at the "consultations." Addresses will be delivered by Lord Robert Cecil, by the Duchess of Sutherland, and by others interested in the work of the dispensary and of the Health Society. The infants who have secured prizes or certificates will be on view in a separate room. Admission to the meeting is by invitation, or by tickets, 10*s*., 5*s*., and 2*s*. 6*d*., which can be obtained by application to the secretary of the Dispensary, 77, Welbeck-street, W. The proceeds resulting from the sale of tickets are to be devoted to the furtherance of the scheme.

STENOSIS OF THE TRACHEA DUE TO HYPERTROPHY OF THE THYMUS.

CASES of sudden death with symptoms of asphyxia in infants associated with hypertrophy of the thymus have long been recognised. But considerable doubt exists as to their pathology. According to some the enlarged thymus acts mechanically either by direct pressure on the air passages, by interference with the vagus nerves, or by exciting reflexly spasm of the glottis. According to others the enlarged thymus is merely an index of a general lymphatic dyscrasia which entails feebleness. However, there seems to be no doubt that in some of the cases there was distinct pressure on the air passages. In the *Journal of the American Medical Association* of May 25th Dr. C. Jackson has recorded a case in which such pressure certainly existed and which derives additional interest from the fact that it is the only case in which the existence of the pressure has been demonstrated during life. A boy, aged four years, was admitted into hospital on August 30th, 1906. He had always been well until six weeks before, when he awoke at night with an attack of "croup." Since that time he suffered from increasing dyspnœa. On examination there was considerable expiratory dyspnœa which was worse when he sat erect. The colour and general appearance were good and there were no signs of the "lymphatic constitution." Over the sternum there were a tympanitic note, increased vocal resonance, tracheal breathing, and a whistling tracheal rhonchus. Dr. Jackson was asked to examine the case and finding the larynx free from obstruction suspected that there was a foreign body in the trachea and ordered a radiograph to be taken. This showed the shadow of an enlarged thymus gland. On Sept. 5th he opened the trachea under infiltration anæsthesia. The rings seemed of normal resiliency and the thymus was seen to extend abnormally high in the neck, reaching to the thyroid and rising when the patient coughed. On passing a bronchoscope he discovered a scabbard-shaped trachea extending from the second to the fourth ribs with a chink of not over two millimetres on inspiration and one millimetre on expiration. The passage of the bronchoscope instantly relieved the dyspnœa. When the bronchoscope was withdrawn no air entered and asphyxia was threatened. A long cannula was therefore inserted, giving partial relief. From measurements taken a very long tracheotomy cannula extending to within one centimetre of the bifurcation of the trachea was made. It gave complete relief and was worn for four weeks. On the following day there was profuse discharge from the tracheotomy wound and numerous large moist râles were heard all over the lungs; they diminished in a few days. On Oct. 2nd a second operation was performed. On removing the cannula the trachea completely collapsed. The tracheoscope showed mild tracheitis. The cannula was re-inserted. A curved transverse incision was made below the upper border of the sternum to avoid the tracheal wound and carried down to the thymus gland, the sternal attachments of both sterno-mastoids being divided. When the child coughed the thymus bulged into the wound. The finger was passed down into the mediastinum. Numerous fine adhesions to the sternum were broken down. The thymus was drawn up with forceps until its tip projected from the wound. Several fibrous attachments were

ligatured and the thymus was removed. The sterno-mastoid tendons and the wound in the skin were sutured. The child stood the operation very well. The tracheal cannula was removed on the eighth day after operation. There was never the slightest stridor after the thymectomy and no ill-effect seemed to have been produced on the blood or nutrition. Microscopic examination of the thymus showed only simple hypertrophy. This is the seventh case on record of cure by thymectomy of "thymic asthma," or, more correctly, thymic tracheo-stenosis. In performing tracheotomy for its relief a long cannula, which will reach below the obstruction, is necessary. The want of this seems to have been the cause of death in some of the cases.

A DANGEROUS DRY HAIRWASH.

HAIRDRESSERS seem to be at their wits' end to devise an effectual yet safe dry wash for the hair. The chief object of such a wash is, of course, to remove grease and therefore dirt, but unfortunately the best solvents for grease are as a rule volatile and inflammable. Light petroleum spirit appeared at first to be excellent for the purpose until some serious accidents occurred in which somehow or other the spirit was ignited with results disastrous to the hair in some cases and in others to the person also. We have had occasion before to refer to the dangers of employing exceedingly inflammable and volatile liquids such as benzene and petrol as dry hairwashes. If they are used at all the cleansing process should be conducted without risking the slightest chance of the vapour catching fire—in a place, in short, where there is no flame. Even the electric light does not confer immunity from an accident, since any small sparking that may happen at the points of contact at the switch or the lamp is sufficient to start an explosion of air and inflammable vapour. Convinced apparently of the dangers attending the use of liquids which give off inflammable vapours, some of the hairdressing trade have evidently been induced to give them up in favour of a less volatile and practically non-inflammable yet grease-extracting liquid—namely, carbon tetrachloride. It is not surprising to find that the barber is absolutely ignorant of the nature and properties of this chemical substance, and most people would ask, "What is it?" Used largely as a solvent for grease, wax, and rubber in certain technical trades, carbon tetrachloride so far is little known to the ordinary person and certainly less known than is chloroform, to which it is intimately related. As a matter of fact, carbon tetrachloride is just as much an anæsthetic as is chloroform. It is not quite so powerful perhaps, because it is less volatile and its boiling point is higher. But that it may produce anæsthesia sufficiently to develop alarming results is evident from the case which we record this week. This fluid was being used after the manner of an ordinary dry hairwash. Almost at the moment of its application the customer, a lady, cried out that it was far too strong, but the operator replied that it would soon pass off. In the words of our contributor, "her next recollection was that of finding herself propped up on the floor, a wet towel round her head, the window wide open, and a very frightened hairdresser fanning her vigorously with a towel. She was informed that she had been unconscious for five minutes and had been a very nasty colour." She said that she felt just as though she had been taking chloroform and suffered from sickness for some time afterwards. We should have thought that the judicious use of soap and ammonia water followed by rinsing with weak spirit would serve as an effectual wash for the head with long hair which would afterwards dry reasonably quickly. Ladies, however, evidently regard this method as much too slow compared with the rapidly drying but highly inflammable petroleum, and so they run serious risks rather than exhibit a little patience. In passing, it is interesting to observe that most of, if not all, the fluids the vapour of which produces anæsthesia when inhaled are solvents of fat. Ether, chloroform, ethyl chloride, benzene, and light petroleum serve as instances, and apart from the intense inflammability of some of them they should never be countenanced as safe agents in the hands of the hairdresser.

THE CARE OF TUBERCULOUS CHILDREN.

THE needs of tuberculous children have been sadly neglected in this country. Some doubt seems to be arising as to whether open-air treatment for the adult, although offering the best means for dealing with tuberculosis in the working man and woman, is that specific which early enthusiasts proclaimed it to be. We are beginning to understand that medically, as well as economically, it is wisest to begin at the beginning. Greater attention must be devoted to the protection of tuberculously disposed children. The committee of the Children's Home and Orphanage, the headquarters of which are at Bonner-road, London, N.E., with branches throughout the country and in Canada, and caring for nearly 1800 children, finds that something like 25 per cent. of its little folk are predisposed by heredity to tuberculosis. It has, therefore, determined to establish a sanatorium in a suitable country district near London for these cases. Dr. T. N. Kelynack, the editor of the *British Journal of Tuberculosis*, has accepted the invitation to act as honorary physician and medical adviser, and full particulars may be obtained from the principal, Dr. A. E. Gregory, at the London Branch Children's Home and Orphanage, Bonner-road, N.E. We are informed that the forthcoming issue of the *British Journal of Tuberculosis* will contain articles by British, American, and German experts on the tuberculosis problem as it affects infancy and childhood.

MSS. OF JOHN HUNTER'S LECTURES.

IT has been suggested to us that the title of an annotation in a recent number of THE LANCET ("Original Notes of John Hunter's Lectures") might convey the impression that a unique discovery had been made. This is not the case of course. The manuscript, which has just been presented to the Royal College of Surgeons of England by a medical man of long standing, who thus generously commemorates his jubilee as a Member, has long been known in the College library in the form of one of those exquisitely written transcripts for which Clift, the conservator, was justly noted in his day. This transcript was made by William Clift in 1835, ar l .n returning the original to Dr. T. J. Walker's predecessor in his Peterborough practice he apologises in an extant letter for having kept the book for eight long years. Clift was a leisurely and faithful transcriber of all that concerned his great master John Hunter and his transcripts were often made at rather late hours. More than one ends with some such note as "finished this copy at 2 A.M.," usually in mid-winter. There are a number of volumes of notes of John Hunter's lectures on surgery in the library of the Royal College of Surgeons of England. The best known is the quarto four-volume MS., dating from 1786, which was reprinted by Palmer in his classical edition of John Hunter's works. More recently Sir John Tweedy has presented a fine MS., containing a note by Clift to the following effect: "Mr. Eyles's copy of Dr. Joseph Adams's account of Mr. Hunter's lectures on the Principles of Surgery. No date. Lent to me June 4th, 1827, to compare with Mr. Twigge's and Mr. Pearce's copy." Another MS. of "Lectures on the Principles of Surgery," in an unknown hand, was bought at a sale at Sotheby's in May, 1904, where it was

"knocked down," with other interesting MSS. in a bundle, for 1s.! Scientific and medical men were evidently absent from this sale. We are reminded in this connexion of Mr. Blades's story of finding a black-letter Caxton, which in the auction-room would have fetched many hundreds of pounds, in a region that cannot be named in polite society. The people of the farmhouse where he was staying had been steadily working through several volumes of these priceless incunabula. On the corner of the mill-board cover of the Hunter MS. last discussed are the words "Jno. Hunter," but it is impossible to say who wrote them.

EPIDEMIC CEREBRO-SPINAL FEVER.

IN London during the month of May there were 21 cases notified as cerebro-spinal fever, five of them belonging to Lambeth and two each to St. Pancras, Poplar, Bermondsey, Battersea, and Deptford. During the same period seven deaths from the disease were recorded—namely, four in Lambeth and one each in Fulham, Bermondsey, and Deptford. In Scotland during the week ended June 15th there were 14 deaths from this cause registered in Glasgow, seven in Edinburgh, and two in Leith. In Glasgow the weekly report issued on June 14th showed that there were at that time 98 cases under treatment. In Belfast during the week ended June 15th there were 15 deaths registered as being due to this cause.

THE DIAGNOSIS OF DILATATION OF THE DUODENUM.

RECENTLY attention has been drawn to dilatation of the duodenum by the observation of surgeons during operations. Ochsner has pointed out the existence of a duodenal sphincter and many writers have shown that dilatation may result from obstruction due to traction of the root of the mesentery over the lower end of the duodenum in conditions of enteroptosis. In the *Boston Medical and Surgical Journal* of May 9th Dr. A. Christian has reported the following case. A man, aged 70 years, was admitted into hospital on Dec. 31st, 1903, complaining of pain in the stomach after eating, occasional vomiting, and constipation. The abdomen was flaccid and not tender. Pressure on the epigastrium and left hypochondrium caused eructations of gas. Under gastric lavage and cathartics improvement took place. In one month ten pounds were gained in weight. Before the patient's discharge on Feb. 1st, 1904, inflation showed that the lower border of the stomach was three cubic centimetres below the umbilicus. The patient remained well until June, when the symptoms recurred. He improved again but was readmitted in March, 1905. An attempt to inflate his stomach by means of a seidlitz powder was unsuccessful. A stomach tube was passed and 115 ounces of water were put in. Of this only 48 ounces could be recovered. On a subsequent occasion with the patient sitting up the lower border of gastric resonance was found to be 13 centimetres below the costal margin in the left mamillary line and two centimetres below the umbilicus and to reach the right costal margin at a point six centimetres to the right of the median line. Further to the right there was an area of tympany, the lower border of which could not be well defined. By means of the stomach tube 96 ounces of water were introduced and the lower border of the tympany was raised two centimetres on the left, and the area of tympany on the right disappeared. Only 67 ounces of water could be recovered. The lower border of tympany was now 17 centimetres below the costal margin on the left and six centimetres below the xiphoid. Inflation with air lowered the line of tympany four and a half centimetres. A tentative diagnosis of hour-glass stomach or dilated stomach and duodenum was made. On April 21st, 1905, gastro-enterostomy was performed. The stomach was found enormously dilated but there was no pyloric obstruction. The patient stood the operation badly and died in the evening. The necropsy showed dilatation of the stomach and duodenum. The latter was 12 centimetres in circumference. There were also chronic adhesive peri-carditis, hypertrophy, and dilatation of the heart, and chronic nephritis. This case shows the possibility of determining by the use of the stomach pump tube the existence of two pouches so connected by a patulous opening that both can be filled with water which can be syphoned back from only one. Such a condition would occur both in hour-glass stomach and in duodenal dilatation with pyloric relaxation. In the latter condition the second pouch would be well to the right side, as in the case described above.

HAIRS AND BRISTLES AND ANTHRAX.

THE Secretary of State for the Home Department issued a circular letter in May last year which inclosed a copy of a report on the incidence of anthrax in the manipulation of horsehair and bristles. The proposals contained in the circular have since received the consideration of a number of manufacturers and others interested in the industry. It is now suggested that all horsehair from China, Siberia, or Russia (with the exception of white or light-grey hair which might suffer damage in the process) should be disinfected before undergoing any process other than those of opening or sorting. It is recommended that arrangements should be made, at least as regards a large proportion of the material, for its disinfection by, or on behalf of, the importers before distribution to the manufacturers. If this procedure were adopted it would diminish the regulations applying to the factory or workshop. In view of the small proportion of cases that can be traced to the use of bristles it has been decided tentatively to exclude bristles from the scope of the regulations, but the hope is expressed that the installation of disinfecting apparatus may lead manufacturers to adopt the practice of the disinfection of the undressed bristles known in the trade as "riffings" and so to render the manipulation of such material free from risk. That regulations in this trade are desirable is emphasised by the fact that between Jan. 1st, 1906, and March 31st, 1907—the period since the figures referred to in the report were made up—17 cases of anthrax, including six deaths, occurred in connexion with horsehair and bristles. The regulations proposed are to receive further consideration and any communication in regard to them is to be sent in to the Home Office not later than July 7th.

THE MILK QUESTION IN NEW YORK.

AT a meeting of the Medical Association of the Greater City of New York an instructive debate on the various questions of milk-supply has recently taken place in New York. An interesting part of this debate related to municipal and State regulations, in which connexion an admirable paper was presented by Dr. W. Goler, health officer of Rochester, New York, who is a recognised authority on the subject. He said that however practical in their labours the men engaged in the storing and distribution of milk might be they could not be scientifically trained either in the housing and feeding of cattle or in handling and transporting milk. To insure a safe milk-supply to a city Dr. Goler considered that a sufficient number of inspectors was necessary to inspect really and not merely to report. They should collect monthly samples for bacteriological and chemical examination from the farms, and at least a sample from each shop offering milk for sale should be similarly examined every three months. There should be a daily inspection of the incoming milk at each railroad station for (1) condition of and housing of cans and bottles in shipment; (2) condition of

empty cans reshipped; (3) temperature of milk; and (4) inspection of railroad samples to guard the retailers against fraud on the part of the wholesale dealers. "And the country part of the work," remarked the speaker, "is of even greater importance than the city part. The territory from which a city draws its milk-supply must be mapped out, the situation of the dairies ascertained, the roads examined, the railroad facilities noted, and the routes laid out, so that every farm which sent milk to the city may be subjected to systematic inspection every month." Dr. E. B. Vorhees of New Brunswick, New Jersey, a director of the New Jersey Agricultural Experiment Stations, dealing with the same question of systematic State control, pointed out that the State should also make such regulations for the retailer as should guarantee proper care in transporting and storing of the milk and its distribution as well as the requisite cleansing and return of the vessels in which the milk had been transported. In the articles upon the railway transport of milk to London recently published in THE LANCET stress was laid upon the absence of proper facilities for bringing milk to London by rail in a speedy and cleanly manner. The subject is an enormously important one and seems to be discussed more seriously and to be tackled more energetically in America than in England, though the enormous distances to be traversed by American trains should make organisation more difficult.

THE TEACHING OF HYGIENE AND TEMPERANCE IN SCHOOLS.

THE question of imparting systematic instruction in the principles of hygiene and temperance to school children has during the past year been occupying the careful attention of many prominent members of the medical profession and others interested in the health of the nation. We published in November last an account of the proceedings of the deputation to Mr. Birrell advocating the teaching of hygiene and temperance in elementary schools, and urging that not only should these subjects be specifically introduced into the curriculum of the code but that facilities for special training in them should be afforded to school teachers and that they should be reported on by His Majesty's inspectors. The deputation met with a courteous and sympathetic response in which Mr. Birrell suggested that the introduction of these subjects into the science curriculum should be gradually accomplished and that the training of the teachers was the most important step to be taken. The public interest thus aroused in the matter has recently found expression in a petition to Mr. McKenna, signed by nearly 200 Members of Parliament, supporting similar objects. As we reported in our last issue, Lord Strathcona headed a deputation to the President of the Board of Education on June 6th again urging this matter on his attention and suggesting the establishment of a medical bureau in the Education Department, to which Mr. McKenna replied that until the Bill which contained provisions dealing with the medical inspection of school children had become law he could not declare the settled policy of the Board of Education on the subject. A strong local reflection of the central interest that has been taken in this matter is shown in the report for 1906 made by Dr. Alfred Greenwood to the education committee of Blackburn, of which he is the medical officer. During the year evening classes on school hygiene were given to school teachers, based on a syllabus that is printed in the report, which summarises a course of 26 lectures and to which the attention of other local educational authorities may be given with advantage. As a result of the Blackburn lectures eight school teachers from that town passed in one or both parts of the examination in hygiene in its bearing on school life conducted by the Royal Sanitary Institution, and the committee has decided to ask all future applicants for teachers' posts whether they have any similar qualification in school hygiene. Dr. Greenwood states in his report that the importance of teaching hygiene is not yet appreciated sufficiently and we trust that the vigorous attempt to grapple with it made in Blackburn will stir up other towns to follow its example.

THE medals and prizes gained by the successful students at Guy's Hospital will be distributed by Sir A. W. Rücker, F.R.S., the Principal of the University of London, on July 4th, when a garden party will be held at 3.15 P.M. Academic costume will be worn on the occasion. The laboratories, museums, college, the Henriette Raphael Nurses' Home, and the wards will be open to inspection from 3 to 5.30 P.M.

THE medical officer of health of the Cape Colony reports that during the week ending May 18th no case of plague in man was discovered, but two cases discovered during the preceding week remained under treatment. On May 24th a case of plague was discovered in a European female who was removed to the local plague hospital, so during the week ending May 25th three cases were under treatment.

THE Local Government Board has established new premises for the preparation and distribution of glycerinated calf lymph for the use of public vaccinators and has notified that all applications for calf lymph should now be addressed to the Government Lymph Establishment, Colindale Avenue, The Hyde, N.W.

THE first general meeting of the medical and surgical sections of the Royal Society of Medicine will be held at 20, Hanover-square, London, W., on Monday, June 24th, at 5.30 P.M., for the purpose of electing officers and council and transacting other necessary business.

THE death is announced of Dr. Julius Dreschfeld, consulting physician to the Manchester Royal Infirmary, and for many years professor of medicine at the Owens College. We hope to publish an extended notice of his career in a future issue.

Dr. R. Welsh Branthwaite, His Majesty's inspector under the Inebriates Act, will deliver the second Norman Kerr memorial lecture, under the auspices of the Society for the Study of Inebriety, on the evening of Tuesday, Oct. 8th.

THE first meeting of the Society of Tropical Medicine and Hygiene will be held at 20, Hanover-square, London, W., on Wednesday, June 26th, at 8.30 P.M. An address will be delivered by the President, Sir Patrick Manson.

Mr. H. Rider Haggard, J.P., will distribute the prizes to the successful students at St. Thomas's Hospital in the Governors' Hall on Wednesday, June 26th, at 3 P.M.

THE annual meeting of the general committee of the Imperial Cancer Research Fund will be held at Marlborough House on Monday, July 1st.

WATER-SUPPLY OF PAIGNTON.—A Local Government Board inquiry was recently held at Paignton, Devonshire, into the application of the Paignton urban district council to borrow £12,861 for the distribution of the new water-supply in the town. This is in addition to the £111,000 for which borrowing powers have already been obtained.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE following are some of the principal amounts received at the Mansion House, or notified directly to us as having been collected, on behalf of the Metropolitan Hospital Sunday Fund up to Tuesday evening last, when the sum paid in exceeded £23,500. It seems doubtful at present whether the result of the collections in the churches will be equal to that of last year. The incumbent of a well-known West-End church, in deploring the decreasing contributions from his church, attributes the falling-off to the "week-end" habit; and in this connexion we hear of a suburban golf links where the "whip-round" amongst the golfers had the result of realising more than the collection in the neighbouring church :—

	£	s.	d.
St. Michael's, Chester-square	1282	0	0
Charles Morrison, Esq.	500	0	0
William Herring, Esq.	500	0	0
St. Mary's, Bryanston-square	400	0	0
St. Paul's Cathedral	394	0	0
All Saints, Ennismore-gardens	338	0	0
St. Nicholas's, Chislehurst	286	0	0
St. James's, Piccadilly	282	0	0
Union Chapel, Islington	212	0	0
Messrs. Watts and Co.	210	0	0
A. G. P.	200	0	0
Delta	200	0	0
Holy Trinity, Tulse Hill, and Mission	188	0	0
Christ Church, Chislehurst	142	0	0
Aldenham Parish Church and Chapel	142	0	0
Emmanuel Church, Wimbledon	141	0	0
Bickley Parish Church	130	0	0
St. John the Evangelist, Penge	123	0	0
Temple Church	121	0	0
Bromley (Kent) Parish Church	121	0	0
St. Bartholomew's, Sydenham	115	0	0
Holy Trinity, Sydenham	115	0	0
St. Matthew's, Bayswater	105	0	0
St. Mary's, Kilburn	104	0	0
St. John's, Southwick-crescent	103	0	0
Brixton Independent Church	101	0	0
St. Andrew's, Leytonstone	100	0	0
A few Members of the Theistic Church (per Rev. C. Voysey)	100	0	0
St. Mary Bottons	100	0	0
Mrs. Jowers	100	0	0
F. G. D.	100	0	0
Alex. Miller, Esq.	100	0	0
Mr. and Mrs. C. E. Layton	100	0	0
W. D. Graham-Menzies, Esq.	100	0	0
St. Martin's-in-the-Fields	97	0	0
St. Mark's, Reigate	94	0	0
St. Paul's, Westbourne-grove	93	0	0
St. Mary's, Shortlands	93	0	0
St. Peter's, Bayswater	91	0	0
St. Anne's, Soho	90	0	0
Christ Church, Mayfair	89	0	0
Greek Church, Bayswater	87	0	0
Church of the Annunciation, Chislehurst	85	0	0
St. Andrew's Presbyterian Church, Frognal	85	0	0
St. Alban's, Streatham-park	85	0	0
St. Anne's, Wandsworth	80	0	0
St. John's Presbyterian, Kensington	80	0	0
St. John's, Putney	79	0	0
Oratory, South Kensington	78	0	0
Regent-square Presbyterian Church	78	0	0
St. James's, Kidbrook	77	0	0
Kensington Congregational Church	75	0	0
St. Michael's, Blackheath	75	0	0
St. James's, Muswell Hill	70	0	0
St. Luke's, Hampstead	70	0	0
Beckenham Parish Church	69	0	0
Holy Trinity, Upper Tooting	65	0	0
Weybridge Parish Church	64	0	0
St. George's, Perry Hill	60	0	0
Lemsford Parish Church	60	0	0
St. Saviour's, Paddington	60	0	0
Church of the Immaculate Conception, Farm-street	58	0	0
St. Paul's, Upper Norwood	57	0	0
Christ Church, Newgate-street	56	0	0
Christ Church, Brondesbury	56	0	0
Trinity Church, Hampstead	55	0	0
Church of the Ascension, Blackheath	55	0	0
Hornsey Parish Church	55	0	0
St. Mary's Parish Church, Stoke Newington	55	0	0
St. Luke's, Radcliffe-square	53	0	0
Carmelite Church, Kensington	53	0	0
St. James's, Hatcham	53	0	0
Messrs. J. H. Vavasseur and Co.	52	0	0
St. Magnus the Martyr, London Bridge	52	0	0
Clapham Parish Church	52	0	0
St. Paul's, Winchmore Hill	51	0	0
St. Stephen's, Ealing	51	0	0
St. Mark's, Marylebone-road	51	0	0
St. Andrew's, Stockwell	50	0	0
St. John's, Redhill	50	0	0
F. Fleischmann, Esq.	50	0	0
Miss M. E. Druce	50	0	0
St. John the Baptist and All Saints, Epping	42	0	0
St. George's, Bloomsbury	48	0	0
Brixton Parish Church	48	0	0
Dulwich College Chapel	46	0	0
St. Paul's, Camden-square	45	0	0
St. John's, Sidcup	45	0	0
Guards Chapel, Wellington Barracks	44	0	0
St. Mark's, Surbiton	44	0	0
Central Hill Baptist Church, Norwood	44	0	0
Hendon Parish Church and Chapel	43	0	0
West Wickham Parish Church	43	0	0
Ferme Park Baptist Chapel, Hornsey	43	0	0
Crouch Hill Presbyterian Church	43	0	0
Grosvenor Chapel, South Audley-street	42	0	0
Mitcham Parish Church	41	0	0
St. Germain's, Blackheath	41	0	0
St. Mary's, West Kensington	41	0	0
Chapel Royal, St. James's	41	0	0
St. Saviour's, Denmark Park	40	0	0
St. Paul's, Forest Hill	40	0	0
St. Andrew's, Totteridge	40	0	0
Christ Church, Highbury	40	0	0
St. Matthias's, Earl's Court	39	0	0
St. Mary the Virgin, Hayes	38	0	0
Hornchurch Parish Church	38	0	0
St. Stephen's, Wandsworth	37	0	0
St. Paul's, Wimbledon	37	0	0
St. Mary Magdalene's, Wandsworth	37	0	0
Gray's Inn Chapel	37	0	0
St. Stephen's, Westminster	37	0	0
Merton Parish Church	37	0	0
St. Luke's, Hornsey	36	0	0
St. Augustine's, South Kensington	36	0	0
St. Stephen's, Hampstead	36	0	0
St. Michael's, Bechworth	36	0	0
St. Jude's, Chelsea	35	0	0
St. Mary Magdalene's, Enfield	35	0	0
Islington Parish Church	35	0	0
Christ Church, Wanstead	34	0	0
St. Mary's and All Saints, Ealing	34	0	0
Blackheath Wesleyan Church	43	0	0
St. Mark's, Kennington	33	0	0
St. Matthew's, Westminster	32	0	0
Little Ilford Churches	32	0	0
King's Weigh-House Chapel	32	0	0
Our Lady of Victories, Kensington	32	0	0
Pinner Parish Church	31	0	0
Chigwell Parish Church	31	0	0
Gordon-square Catholic Apostolic Church	31	0	0
St. Peter's, Dulwich Common	31	0	0
St. George's, Tufnell Park	30	0	0
Christ Church, Woburn-square	30	0	0
St. Gabriel's, Cricklewood	30	0	0
Muswell Hill Congregational Church	30	0	0
St. Mary-le-Park, Battersea	29	0	0
St. Andrew's, Whitehall Park	29	0	0
St. John's, Deptford	29	0	0
All Saints, Putney Common	29	0	0
Box outside Mansion House	28	0	0
St. Peter's, Clapham	28	0	0
Hadley (Monken) Parish Church	28	0	0
St. Michael's, Stockwell	28	0	0
St. Gabriel's, Warwick-square	28	0	0
Holy Redeemer, Stoke Newington	27	0	0
St. Anselm's, Pinner	27	0	0
St. Mary's, Putney	27	0	0
St. Andrew Undershaft	27	0	0
New Court Chapel, Tollington Park	27	0	0
St. Anselm's, Davies-street	27	0	0
Ewell Parish Church	27	0	0
Barnes Parish Church	26	0	0
St. Andrew's, Kingswood	26	0	0
Mitcham Parish Church	26	0	0
Woodford Parish Church	26	0	0
Harrow Weald Parish Church	26	0	0
St. Peter's, Fulham	26	0	0
St. Mary's, Primrose Hill	26	0	0
Old Church, Stoke Newington	26	0	0
St. James's, Garlickhithe	25	0	0
Epsom Parish Church	25	0	0
Holy Redeemer, Chelsea	25	0	0
Christ Church, Greenwich	25	0	0
St. James's, Knatchbull-road, Camberwell	25	0	0
Muswell Hill Presbyterian Church	25	0	0
Emmanuel Church, Northwood	23	0	0
Bromley-by-Bow Parish Church	22	0	0
St. Peter's, Walton-on-the-Hill	22	0	0
Bloomsbury Baptist Chapel	22	0	0
Orange-street Congregational Church	22	0	0
Effra-road Unitarian Church	22	0	0
St. Andrew's, Watford	21	0	0
St. Matthew's, Redhill	21	0	0
Christ Church, Harlesden	21	0	0
Bromley Wesleyan Church	21	0	0
St. Cyprian's, Brockley	20	0	0
Trent Church, Enfield	20	0	0
St. Philip's, Sydenham	20	0	0
Chislehurst Wesleyan Chapel	18	0	0
Crayford Parish Church	18	0	0
Downs Chapel, Clapton	17	0	0
St. Margaret's, Upper Norwood	16	0	0
Holy Trinity, Lamorbey	16	0	0
Upper Clapton Congregational Church	14	0	0
St. Stephen's, Rounslow	13	0	0
Royal Hospital Chapel, Chelsea	13	0	0
Wesleyan Church, Muswell Hill	12	0	0
Wesleyan Methodist Church, Archway-road, N.	10	0	0

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on June 13th, Mr. HENRY MORRIS, the President, being in the chair.

A report was received from the deputation to the Lord President of the Privy Council concerning the representation of the Members on the Council of the College. The deputation reported that it had placed the views of the Council before the Lord President. The deputation consisted of the President, the Vice-Presidents, Mr. Howard Marsh, Mr. H. T. Butlin, and Mr. A. Pearce Gould.

The Board of Examiners in Anatomy and Physiology for the Fellowship reported that at the recent first examination for the Fellowship 113 candidates presented themselves, of whom 37 were approved.

The Court of Examiners for the Fellowship reported that 63 candidates presented themselves for the final Fellowship examination and that 26 candidates had passed.

On the report of the Board of Examiners in Dental Surgery it was resolved to issue Licences in Dental Surgery to the 26 candidates found qualified.

On the recommendation of the Board of Examiners in Dental Surgery it was resolved:—

1. That Colonial dental practitioners who have completed a course of not less than three years' instruction in mechanical dentistry and who have been registered in British Colonies under conditions which do not require the passing of a recognised preliminary examination, be admitted to the examinations for the Licence in Dental Surgery, provided they pass the required preliminary examination in general education and complete the course of study required by the regulations at a recognised medical school and hospital and at a recognised dental school and hospital.
2. That a candidate who possesses a registrable dental qualification be admissible to re-examination without producing certificates of additional study.

It was further resolved:—

That the following regulation recently adopted by the Royal Colleges in regard to Conjoint candidates do also apply to dental students and be incorporated in the regulations for the Licence in Dental Surgery:—

A candidate must present himself for examination in chemistry and physics together (unless he claims exemption from one of them) until he has reached the required standard to pass in both, or in one of these parts, but he will not be allowed to pass in one part unless he obtains at the same time half the number of marks required to pass in the other part.

It was resolved to close the library during September and October next for the purpose of redecoration.

The following appointments as examiners were made:—Elementary Biology: Thomas George Stevens and H. W. Marett Tims. Anatomy under the Conjoint Board: W. H. Clayton Greene, Arthur Robinson, and William Wright. Physiology under the Conjoint Board: Bertram Louis Abrahams and John Beresford Leathes. Anatomy for the Fellowship: Christopher Addison, W. McAdam Eccles, Arthur Keith, and Alfred Harry Young. Physiology for the Fellowship: Thomas Grigor Brodie, George Alfred Buckmaster, Charles F. Myers-Ward, and W. H. Thompson. Midwifery under the Conjoint Board: A. H. N. Lewers, H. J. M. Playfair, W. Rivers Pollock, and W. W. H. Tate. Diploma in Public Health: Part. I., Harold R. D. Spitta; Part II., H. Timbrell Bulstrode.

The PRESIDENT reported that Professor William Wright had duly delivered a course of three Hunterian lectures on the Prehistoric and Early Historic Inhabitants of England.

In pursuance of the wishes of the Royal College of Physicians of London it was resolved that the committee of management should be authorised to enter into negotiations with the examining bodies with a view to secure the necessary rearrangement of the curriculum suggested by the Midwifery Curriculum Committee in order to obtain two and a half years for the clinical portion.

A letter was read from the Secretary of the London School of Medicine for Women forwarding a final list of 84 additional signatures to the petition for the admission of women to the examinations of the College, making a total of 2792 signatures.

A letter was read from Lieutenant-Colonel Sir J. Fayrer, R.A.M.C., thanking the Council on behalf of Lady Fayrer and all the members of the family for sympathy and condolence on the death of his father, Sir Joseph Fayrer, Bart.

The PRESIDENT reported that a meeting of Fellows would be held at the College on Thursday, July 4th next, for the election of four Fellows into the Council in the vacancies occasioned by the retirement in rotation of Sir John Tweedy, Mr. H. W. Page, Mr. C. W. Mansell Moullin, and Mr. F. S. Eve, of whom Sir John Tweedy did not offer himself for re-election.

A vote of thanks was given to Sir John Tweedy for his long and zealous services to the College.

THE RED CROSS CONFERENCE.

THE Eighth International Red Cross Conference was opened at the Examination Hall, Victoria Embankment, London, on June 11th under the presidency of Field Marshal Lord ROBERTS. In opening the proceedings Lord Roberts said that since the British Red Cross Society was established in 1870 by the late Colonel Lord Wantage, V.C., no less than half a million of money had been expended in providing comforts for soldiers and sailors in hospital. Of this sum £162,000 were spent during the war in South Africa. After expressing the hope that the deliberations of the delegates would result in further developing the methods for alleviating the sufferings unavoidable during a state of war, he read a letter from the Queen, the President of the British Red Cross Society, in which Her Majesty welcomed the first international meeting on British soil, and also a telegram from the Empress of Russia wishing success to the labours of the Conference. Lord Roberts then read a letter from Miss Florence Nightingale and declared the Conference open.

The Marquis DE VOGÜÉ, Baron VON DEM KNESEBECK, and M. G. ADOR addressed the assembly, after which the following were appointed vice-presidents: The Marquis de Vogüé (French central committee), Sir F. Treves (English central committee), Sir John Furley (Great Britain), Baron von dem Knesebeck (Germany), Prince Hague de Dietrichstein (Austria), Major-General C. H. Arendrup (Denmark), Colonel William Cary Sanger (United States), Count André de Csekonics (Hungary), Count Rinaldo Taverna (Italy), Baron Takeo Ozawa (Japan), Baron de Hardenbroek de Bergambacht (Holland), M. de Martens (Russia), and M. Ador (International Committee). M. Edouard Naville was appointed general secretary with the following as secretaries: M. Tasson (Belgium), M. Wunderlich (Germany), M. Pérouse (France), M. Neiss (Switzerland), Dr. Calatraveno (Spain), M. Motzfeldt (Norway), M. Ackerman (Sweden), and Dr. Bikélas (Greece).

On June 12th the delegates met under the chairmanship of the Marquis DE VOGÜÉ. After some discussion it was decided that the income of the Empress Augusta Fund, which amounted to about £200 a year, should be devoted to the establishment of travelling scholarships so that selected members of the German Red Cross societies could visit different countries and investigate the methods followed by other societies. By this means the next International Conference in 1912 will have a body of experts in international questions affecting the Red Cross.

M. DE MARTENS submitted a report from the Russian central committee on the subject of the succour of prisoners of war, and after considerable discussion the following was adopted as a resolution:—

The Eighth International Red Cross Conference expresses the opinion that Red Cross societies should recognise that, by force of circumstances, they are obliged to render assistance to prisoners of war subject to the stipulations of the Hague Convention of 1899 and within the limits prescribed by the laws and customs of their countries. The Conference takes cognisance of the declaration of the International Committee of Geneva, offering to act, in case of need, as intermediaries between the central committees of different countries.

On June 13th the Conference resumed its deliberations when the Marquis DE VOGÜÉ again presided.

M. ADOR read a communication from Dr. ARIGA of the Japanese Red Cross Society offering Japanese hospitality for the next International Conference.

General PRIOU, a member of the Union des Femmes de France, read a paper on the Place and Part of Women in Sanitary Establishments and Hospitals in Time of War. He proposed, in the name of the central committee of the French Red Cross, that the Conference would express the hope that, in all nations, the greatest efforts should be made to bring the masses to recognise and to understand well the necessity of employing women in the territorial hospitals in time of war and of imparting preliminary instruction to them from the material as well as from the moral point of view. The proposition was unanimously agreed to.

Mr. G. H. MAKINS, C.B., member of the council of the British Red Cross Society, read a paper on the Rôle of Red Cross Societies during Maritime War. He said that the nature and extent of the aid which could be given by such societies during a naval war was a question of extreme difficulty, partly from the conditions attendant on such warfare and partly from the want of sufficient practical experience. In regard to the general administration of hospital ships, it was desirable that in every respect, as to discipline, equipment, and rations, all hospital ships should be on an identical footing. Medical officers and male and female nurses would certainly be needed in a great war in numbers far above that which any navy could possibly supply. The requirements in regard to the provision of stores and dressings differed little from those of military warfare, but it had to be borne in mind that dressings suitable for military first aid were quite different from those needed in naval campaigns, where the rarity of rifle wounds and the frequency of extensive shell wounds, burns, and scalds rendered a much larger type of dressing a necessity.

Baron TAKEO OZAWA (Japan) contributed a paper on the work of the Japanese Red Cross Society. He said that according to military reports there were in the late war 220,812 wounded and 334,073 sick Japanese soldiers and 77,809 sick and wounded Russian prisoners. Deducting from this the number of those who died on the field or were missing, the approximate number of patients which the Army Medical Service had to take care of during the war was 583,000. The Army Medical Corps and the relief corps of the Red Cross Society always worked side by side in the same hospitals, and the relief corps of the society, in the area of operations, on board ship, and in the home territory gave aid to the same patients at different stages of their treatment. In almost all the hospitals on the line of communications and at home the relief corps was entrusted with the treatment of severe medical and surgical cases and infectious diseases, and only the Red Cross Society's nursing *personnel* was used in hospital ships. The Japanese army and navy had no female nurses in their organisations. The two hospital ships of the society were specially built for the purpose of being hospital ships and their transport column was a new organisation having no equivalent in the army. For the whole work of relief during the war the society employed 5170 persons, who were organised into 152 relief corps, and spent a little over half a million pounds sterling.

Motions to the following effect were adopted:—

(1) The experience of the Russo-Japanese War confirms the urgency of the organisation of a network of stores of sanitary material in time of peace; (2) in order that this organisation may rise to the height of the object proposed, it is necessary that it should be directed by a competent organ, which would be kept constantly informed concerning scientific and technical progress; (3) the renewal of the sanitary material will be effected by the sale of the said material to the hospitals and communities under the control of the representatives of these institutions.

The Marquis DE VOGÜE again presided on June 14th.

Dr. FERRIÈRE (France) brought up the report presented by the International Committee on the participation of the Red Cross in the struggle against tuberculosis. It stated that Red Cross Societies should aim at (1) obtaining from the military authorities the communication of medical reports concerning men refused as recruits as tuberculous or suspected of becoming so, as well as those concerning soldiers who had become tuberculous in the service and had been discharged on that account; (2) obtaining, so far as possible, by the intermediary of the military and civil authorities that persons belonging of right to the army but discharged as a measure of military prophylaxis owing to tuberculosis should not become itinerary centres of tuberculous contagion in the civil population; (3) the putting of Red Cross Societies in relation with organisations, official or private, competent to assure to tuberculous persons discharged from the army care, assistance, and supervision both in their own interest and in that of general prophylaxis; and (4) direct intervention, when necessary, in the aid given to those eliminated from the army, either by the creation of institutions *ad hoc*, sanatoriums, labour colonies, agricultural colonies, or invalid asylums, or the supervision of the patients in their own families, whether by subventions in money, *matériel*, or *personnel* given to the existing anti-tuberculous institutions. After some discussion it was unanimously resolved that it was desirable that Red Cross Societies should take part in time of peace in the effort to combat tuberculosis, by devoting their attention more particularly to men refused as recruits as well as to soldiers eliminated from the army as tuberculous, or suspected of becoming so. In this respect the support of the civil and military authorities was necessary to realise an efficacious prophylaxis.

The Marquis DE VOGÜÉ, as President of the Central Committee of the French Red Cross, read a paper by Professor Félix Guyon, which dealt with the question of good dressings for wounds. In the course of the paper the writer paid a very high tribute of praise to Lord Lister. He proposed (1) the organisation in the army and the civil population of theoretical and practical instruction in regard to the dressing of wounds, and the spreading by that teaching of measures which would protect the people and things from contamination; and (2) a special study of the measures which in time of war, as in time of peace, assure to the wounded the application of a dressing made as quickly as possible, in conditions which obviate the danger of infection. These proposals were agreed to and the members of the Conference rose as a mark of respect for the name and work of Lord Lister.

The concluding sitting of the Conference was held on June 15th. In the afternoon the delegates were received by the King and Queen at Buckingham Palace.

THE EXHIBITION.

In connexion with the Conference an exhibition of Red Cross appliances was held at Prince's Hall, Earl's Court. The first day, June 11th, was devoted to a private view by the delegates and the press, but an unexpected visit by the Queen, who was accompanied by the Queen of Denmark and Princess Victoria, gave great satisfaction to the exhibitors. Princess Christian and Princess Victoria of Schleswig-Holstein visited the exhibition on June 14th.

Part of the exhibits were sent by the various Red Cross Societies in order that delegates might become acquainted with the work of the different national societies and part were sent in for competition for prizes established in 1902 by the Empress Marie Féodorovna of Russia. It was hoped that by opening the exhibition free to visitors to the Earl's Court Exhibition for a few days a stimulus would be given to public interest in Red Cross work, but it is to be feared that from this point of view the exhibition was not an unqualified success. With few exceptions the exhibits were overcrowded and it was almost impossible for the general public to gain any very clear idea of the work which the Red Cross Societies accomplish.

The German section was well represented, the individual exhibits being very large but of varying degrees of excellence. A notable feature of this section was the large number of improvised first-aid appliances. America, Austria, Denmark, Holland, France, Mexico, Italy, Japan, Russia, and Switzerland showed appliances of varying degrees of merit. Among the exhibits of the Russian Red Cross Society was the interesting model of a hospital train made under the direction of the senior, Dr. Madame Affanasieff and of the Sister of Mercy Olive. The original of the model was used in the late Russo-Japanese war and consisted of goods wagons converted into a travelling hospital. Much ingenuity is shown in the fitting up of the wagons which, of course, were never intended for the transport of wounded men. Some other appliances actually used at the seat of war were also shown.

Among the private firms and individuals who exhibited in the foreign sections Messrs. Utermohlen and Co. (Amsterdam) had a simple and useful first-aid dressing which folds into a packet 2 by 1½ by ½ inches. It is so folded that the surface intended for contact with a wound cannot become contaminated with foreign matter before use. Under the ægis of the Swiss Red Cross Society Mr. D. Hommel showed an ingenious apparatus with two bicycles for carrying wounded. In the same section two stretchers mounted on bicycle wheels were shown by Dr. W. Sahli. These would appear to be of great use in certain circumstances. Messrs. Weber (agents, H. Surbeck and Co., Cheapside, London, E.C.) exhibited a stretcher adopted by the Swiss army which divides into two parts, each of which weighs 10 pounds and is carried folded up by an infantry soldier and slung over the shoulder like a rifle. All parts are interchangeable and the stretcher is of a very practical nature.

In the British section Sergeant-Major H. Barratt had an interesting collection of appliances the outcome of his experiences in the South African war. They are all designed with the object of facilitating the carrying of wounded men and of minimising pain by reducing jolting and vibration.

A combined stretcher and sling carrier and a hammock stretcher are as simple as they are likely to be useful, while a spring bracket to support stretchers should prove of great service to wounded when travelling over rough roads in carts or on the floors of railway wagons. A portable stretcher is so constructed that the patient can be laid upon a canvas sheet and the stretcher built round him. All materials likely to be required for first aid are carried in the handles of the stretcher, which are hollow. Messrs. J. and A. Carter (New Cavendish-street, London, W.) exhibited a specially designed field ambulance and two two-wheeled ambulances, the "Currofax" and the "Salvator." All are fitted with their patent Rastilon suspensory automatic weight-adjusting springs which were described in THE LANCET of July 28th, 1906, p. 236. The field ambulance is worthy of special note on account of the ease with which it can be dismantled and the small space into which it can be packed. The "Salvator" street ambulance has, we understand, been in use by the City police for the past nine months and has given entire satisfaction. Major R. H. Luce, R.A.M.C. (Volunteers), showed a single-wheeled stretcher mounted on a single bicycle wheel for use with the ordinary British army stretcher. Colonel H. G. Hathaway, R.A.M.C., Colonel Valentine Matthews, R.A.M.C. (Volunteers), and Major W. Kirkpatrick had several interesting exhibits, while Major E. H. Richardson showed two dogs for use in searching for wounded men. They are the result of a cross of specially selected breeds and have been found of great use in finding men in places likely to be overlooked by stretcher bearers, especially in night attacks. They carry first-aid dressing and stimulants. Such dogs, we understand, have been adopted by several of the continental armies and were used during the late Russo-Japanese war. Messrs. Leslie, Limited (5, Lloyd's-avenue, London, E.C.), exhibited their various dressings, and the St. John Ambulance Association showed a military ambulance wagon which can be used for either civil or military purposes and two litters of an improved type which have a like double use. Messrs. Henri Simonis and Company (Norfolk-street, London, W.C.) showed their ambulance cycle. When folded up it is an ordinary bicycle on which an ambulance man can travel quickly to the scene of an accident. It can be transformed into a two-wheeled ambulance and attached as a trailer to a bicycle. The same firm exhibited a collapsible stretcher, the "Valada," the sides of which are made after the principle of lazy tongs. It weighs about 12 pounds and can be packed into a small compass and carried like a knapsack. Mr. J. Lynn Thomas, F.R.C.S., amongst other exhibits showed a portable operation table. An exhibit that attracted much attention was the universal splint devised by Sir Frederick Treves and shown by Messrs. Evans and Wormull, 31, Stamford-street, London, S.E. The material consists of aluminium rods fitted with flattened staples at intervals of three inches. These are made in lengths of five feet and can be bent to any form. The splints are made by cutting the rods into suitable lengths to form lateral pieces and connecting them by cross bands of aluminium. The tools required are a pair of pliers, a slotted block, and a measure.

INDIAN MEDICAL SERVICE: THE ANNUAL DINNER.

THE annual dinner of the officers of the Indian Medical Service was held on June 13th at the New Gaiety Restaurant, London, Surgeon-General Sir Benjamin Franklin, K.C.I.E., being in the chair. The dinner was well attended and as there were no speeches the proceedings were of an informal and very enjoyable nature. The chairman briefly referred to the loss which the service had sustained by the death of Sir Joseph Fayrer and proposed that the sympathy of the officers of the Indian Medical Service then present should be conveyed to Lady Fayrer.

The members present were:—*Surgeon-Generals:* A. M. Branfoot, C.I.E., W. B. Beatson, G. W. R. Hay, and L. D. Spencer. *Colonels:* C. W. Carr-Calthrop, W. E. Cates, W. H. Henderson, D. E. Hughes, C. H. de la Ferté Joubert, and W. A. S. Wynne. *Lieutenant-Colonels:* A. Alcock, E. Bovill, Sir R. Havelock Charles, K.C.V.O., S. H. Dantra, P. J. Freyer, W. Gray, E. R. Johnson, G. F. A. Harris, H. Herbert, D. P. Macdonald, T. H. Pope, C. L. Swaine, W. H. Thornhill, J. F. Tuohy, and H. R. Woolbert. *Majors:* G. T. Birdwood, W. H. Caldwell, J. Davidson, A. L. Duke, T. W. A. Fullerton, T. A. Granger, P. B. Haig, S. Hassan, J. B. Jameson, C. A. Johnston, H. G. Melville, W. Molesworth, A. H. Nott, P. W. O'Gorman, L. Rogers, P. C. H. Strickland, and R. G. Turner. *Captains:* H. Ainsworth, A. Fenton, J. K. S. Fleming, G. Harkness, J. H. Horton, R. W. Knox, J. C. G. Kunhardt, Hayward Pinch, F. C. Rogers, R. Steen, E. O. Thurston, J. N. Walker, E. L. Ward, J. W. Watson, and W. S. Willmore. The guests present were Sir Thomas Barlow, K.C.V.O., Dr. Dawson Williams, and Dr. R. A. Young.

MEDICINE AND THE LAW.

Lord Howard de Walden v. *Eastes.*

IN the High Court of Justice on June 11th there was concluded the case of Lord Howard de Walden *v.* Eastes. The action was brought to restrain the defendant, George Leslie Eastes, M.B. Lond., M.R.C.S. Eng., a medical practitioner, from carrying on a laboratory of pathology at 62, Queen Anne-street, W., on the ground that the carrying on of this laboratory constituted a breach of covenant. The lease was granted in 1893 by the trustees of the Portland Estate to John and Mary Anne Lintott and contained a covenant that the lessees would not, without the previous written consent of the lessors or reversioners, permit or suffer to be used or exercised in or upon the said premises any trade or business whatsoever, but should and would use and occupy the same as and for a private dwelling-house only, except that the same might be used for residential or professional chambers or for offices; and should not, without such consent as aforesaid, make any alteration of or upon the said premises, or do or suffer anything which should be or tend to the annoyance, nuisance, or damage of the person or persons for the time being entitled in reversion or his or their tenants. In 1901 the Lintotts sublet the basement of the house to the defendant who established there a pathological laboratory. This came to the ears of the agent of the estate who wrote to the Lintotts and called their attention to the covenant. After some argument, in September, 1901, a licence was granted to the Lintotts by which they were empowered to allow the defendant "to carry on microscopical tests of fluids of the human body in the basement portion of the said premises and to affix one name-plate outside the said premises, to contain the name of the said George Leslie Eastes only, ... but on condition that no animals are kept on the said premises for the purposes of experiments, and that no biological tests or inoculation be carried on there, and that nothing be done or allowed upon the said premises which shall cause any injury, nuisance, damage, or annoyance to the licensor, his heirs, or assigns, or his or their tenants." There was a further condition enabling the licence to be revoked or withdrawn by three months' notice and it was provided that on the expiration thereof "the said premises shall immediately cease to be used for the purposes hereinbefore authorised." John Lintott died in 1906 and Mary Anne Lintott assigned the premises to the defendant for the remainder of the term, whereupon he altered the ground floor for use as a laboratory and put up two name-plates in addition to that bearing his own name. The plaintiff alleged that by these acts the defendant had broken the terms of the covenant and had exceeded the terms of the licence, and therefore in November, 1906, the plaintiff gave notice to revoke the licence. Mr. Justice Swinfen Eady, in giving judgment, referred in a most sympathetic manner to the value of the work which the defendant had been carrying on. There was no suggestion of improper advertisement but the whole question was a legal one—namely, whether useful and beneficial as the work of the defendant was, he was legally entitled to carry it on at 62, Queen Anne-street. He had broken his licence in that he had extended the work from the basement to the ground floor and had put up more than one plate and one name. He would not draw any distinction between different branches of the defendant's work. He was doing what the licence authorised but what he was precluded from doing if the licence were determined and as it has been determined he was not entitled to carry on the work. The plaintiff was entitled to an injunction perpetually restraining the defendant during the continuance of the lease from using the premises as a laboratory of pathology and the costs would follow the event. The operation of the injunction

would, however, be suspended over Sept. 29th next to give the defendant time to make arrangements.

We sympathise with Dr. Eastes in his difficulties but we fear that according to the terms of the covenants into which he had entered he placed himself in a wrong position in making the alterations and in acting as he did. It may be that now that the law has declared itself on the side of the landlord Lord Howard de Walden may see fit to allow the work of Dr. Eastes to be carried on as heretofore. It would appear, however, that the authorities of the Portland Estate have recently adopted what may be called a plan of campaign against door plates, for we understand that medical men who have recently gone to reside on the estate have not been allowed to affix such plates to their doors.

Professional Misconduct.

The Court of Appeal gave judgment on June 12th in Hill *v.* Clifford, Clifford *v.* Timms, and Clifford *v.* Phillips—three cases of great importance to the medical profession. There is one important point common to all the three cases. The cases raised a question as to "professional misconduct" and as to the effect of an order of the General Medical Council under the Dentists Act, 1878. The cases originally came before Mr. Justice Warrington. In Clifford *v.* Timms articles of partnership between the plaintiff Clifford and the defendant Timms, who were dentists, provided that if either partner were at any time during the partnership guilty of professional misconduct or discreditable action the other partner would be at liberty to determine the partnership. The defendant gave the plaintiff written notice to determine the partnership upon the ground that he had been guilty of professional misconduct. It was proved that the plaintiff was a shareholder and director of a company which carried on a dental business and which employed unregistered persons to attend patients, and which advertised by means of pamphlets. The General Medical Council, acting under the Dentists Act, 1878, made an order upon the report of a committee, directing the Registrar to erase from the Dentists Register the name of the plaintiff upon the ground that it had been proved that he had been guilty of conduct which was "infamous or disgraceful in a professional respect" within Section 13 of the Act. The defendant tendered in evidence the order of the Medical Council and the report of its committee to show that the plaintiff had been guilty of professional misconduct within the meaning of the partnership articles. Mr. Justice Warrington held that the evidence was not admissible and that upon the facts proved the plaintiff was not guilty of professional misconduct within the meaning of the articles. Before dealing with the judgment in the Appeal Court, it may be observed that Isidore and Ruby Clifford, being registered dentists, had entered into three separate partnerships with Hill, Phillips, and Timms for carrying on the profession or business of dentists and the actions related to the right of these three persons to determine the several partnerships on the ground that the Cliffords had been found guilty of conduct which was "infamous or disgraceful in a professional respect," and had thereupon been removed from the Register of Dentists. It was contended on behalf of the Cliffords that the order of the Medical Council was *res inter alios acta* and not admissible in evidence to prove that they were guilty of professional misconduct. This contention was adopted by the learned judge in the court below, but the Master of the Rolls in the course of his judgment in the Court of Appeal said: "I cannot agree with this view. I think the order is admissible as evidence of the existence of conduct which was 'infamous or disgraceful in a professional respect,' the proof of which fact was essential to the validity of the order of the General Council. In my opinion the order of the General Council should be treated on the same footing as an inquisition. Unless, and until, evidence to the contrary is given the order suffices to prove that the Cliffords were guilty of statutory misconduct. No evidence was given by the Cliffords to rebut this *primâ facie* evidence. I may add that I doubt whether it is competent to any court to review a declaration by the General Council that an act of a particular kind is 'disgraceful conduct in a professional respect,' even though it may be competent to review the decision that a certain individual has committed an act of that particular kind. The result is that, in my opinion, the judgment appealed against must in each case be reversed. Judgment in Hill's action must be given for the relief asked by the claim, and the two actions brought by the Cliffords against Phillips and Timms must be dismissed. The Cliffords must pay the costs in the court below and in this court of each action." It has been held that the General Medical Council is constituted the sole judge of whether a medical practitioner has been guilty of infamous conduct in a professional respect and the court will not interfere where the Council has found anyone guilty after due inquiry. (*Ex parte* La Mert, 4 B. & S. 582.) It would seem that the General Medical Council is bound to give the accused person an opportunity of being heard in his defence, but such person is not entitled to demand to be allowed to appear by counsel. (R. *v.* the General Council, 30 L. J. Q. B. 201.) It is further provided by the Medical Acts that if any of the recognised colleges or medical or surgical bodies at any time exercise any power which they possess by law of striking off from the list of such college or body the name of any one of their members, such college or body shall signify to the General Medical Council the name of the member struck off. A person's name may not, however, be erased from the Register on the ground of his having adopted any theory of medicine or surgery.

Looking Back.

FROM

THE LANCET, *SATURDAY*, June 20th, 1829.

STATE OF THE MEDICAL PROFESSION.

"Non ignara mali, miseris succurrere disco."—*Virg.*

To the Editor of THE LANCET.

SIR,—The observations of H. W. D., in No. 299 of your valuable Journal, have directed my attention to a subject which has long and frequently been matter of painful musing to me—the unprotected, the unbefriended state of the Medical Profession. The remarks of a "Medical Benedick," in a former Number, on the same subject, I had hoped, would have excited, long ere this, the dormant sympathy of its listless members, and have aroused towards their unfortunate and sick-at-heart brethren, those kindly feelings of commiseration which their situation is so well calculated to call forth. Deeply as I, individually, have deplored the apathy which, dwelling in the bosom of its more fortunate members, have allowed these appeals, strong and energetic as they have been, thus to have subsided into oblivion, unnoticed and unheeded, I have hesitated to answer them myself, in the earnest hope, that amongst the hundreds that exist, many voices more persuasive, and pens more influential than my own, would have enlisted themselves in a cause so grateful to the best and noblest feelings of humanity. But alas!

"Rari quippe boni; numero vix sunt totidem quot
Thebarum portæ, vel divitis ostia Nili."

These appeals, in behalf of the forlorn and friendless, have failed in making an impression on the hearts of those to whom they were addressed—the medical profession; but I sincerely trust, for its reputation generally, that the silence which its members have hitherto observed on the subject, is more the result of want of reflection and ignorance of the miseries it is proposed to alleviate, than cruel and wanton indifference to the sufferings of their professional brethren. Let them hear from me, that there are, at this moment, *hundreds* of these brethren, once as affluent as themselves, once as vigorous, and even now, perhaps, of as high acquirements as themselves, pining, many of them with a wife and family, in the very depths of want and misery! I have in my eye, at this moment, a highly talented M.D., with an amiable wife and two accomplished daughters, thus sinking beneath the blight of misfortune, unprotected, unbefriended, and unheeded—eking out their bitter moments in an obscure garret, with naught but their religion to comfort them. But this is not a solitary instance; hundreds, I doubt not, might be mentioned, were it our business to seek them out. Yet is it not horrible that a fate like this should await those members of the community whose lives are spent in administering to the relief of suffering humanity—who sacrifice health and comfort to its necessities—whose lives are devoted to a species of civil slavery, which knows neither rest nor intermission? The

members of the medical profession, unlike all others, are dependent for support no less on their moral than on their professional character; their duties, arduous as they are, afford them, generally, but the bare means of supporting their characters as gentlemen; yet they are obliged, by the narrow-minded feelings of the public, on whom they are dependent, often to enter, prematurely, into obligations the most sacred, and to incur responsibilities the most imposing, lest they labour under disabilities which would render futile their education and attainments. They are subjected, by their investigations of the intricacies of disease, to the dangers of self-destruction by inoculation, or to the sacrifice of health in their devoted attention to their duties, for there is no source of disease in the human body so fertile as that emanating from the harassed state of mind inseparable from the anxieties attendant on those duties. Yet from these, from misfortune, from faculties impaired by age, *we* have no refuge; all other classes enjoy theirs, but we must, with prophetic sagacity, depend alone on uninterrupted health and prosperity to enable us to fulfil the many and sacred obligations our destinies ordain us to incur!

Yet is it not monstrous, that amongst men so enlightened as those which the medical profession numbers in its ranks, misery unalleviated, and misfortune unbefriended—talent unfostered, and labour unrequited—should thus be permitted to exist?—Shall we, on whose sympathy and kindly feelings a greater demand is made than on any other class of men, remain, in the winter of our days, the only beings incapable of arousing, in the breasts of our brethren, those feelings of compunction and commiseration which so readily flow through all other channels? It must not be. If we would not draw down on our devoted heads the maledictions of the broken heart, and the curses of exhausted misery—if we would avoid the hatred and contempt of the more feeling portion of society, of those who are capable of appreciating the cruelty of thus forsaking, in the hour of need, our fellow-labourers—we must hasten (we have delayed too long) to provide them shelter from the passing storm, and a harbour, within whose welcome precincts their shattered barks may ride in safety.

"Solvite corde metum, Teucri, secludite curas;
Auxilio tutos dimittam, opibusque juvabo."

The importance of this subject leads me to hope, that it may forthwith be taken up by far abler pens than mine; should it not, however, I shall take the liberty of submitting to your notice the means I conceive to be the best calculated to carry this grand object into effect.

I am, Sir,
Your obedient servant,

June 1. Σ.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 8771 births and 4026 deaths were registered during the week ending June 15th. The annual rate of mortality, which had shown a continuous decline from 17·9 to 13·7 per 1000 in the ten preceding weeks, further fell to 13·1 in the week under notice. During the first eleven weeks of the current quarter the death-rate in these towns has averaged 15·5 per 1000, the rate in London during the same period being 15·0. The lowest annual death-rates in the 76 towns during the week were 3·9 in Smethwick, 4·4 in Aston Manor, 5·3 in Bournemouth, and 7·0 in Hastings; the highest rates were 20·0 in Tynemouth, 20·4 in Sunderland, 22·0 in Middlesbrough, and 22·3 in Preston. The 4026 deaths in the 76 towns showed a further decrease of 187 from the numbers in recent weeks, and included 430 which were referred to the principal epidemic diseases, against 474 and 463 in the two previous weeks; of these, 172 resulted from measles, 124 from whooping-cough, 50 from diarrhœa, 37 from scarlet fever, 36 from diphtheria, and 11 from "fever" (principally enteric), but not any from small-pox. The deaths from these principal epidemic diseases were equal to an annual rate of 1·4 per 1000, the rate from the same diseases in London being 1·7. No death from any of these epidemic diseases was registered last week in Cardiff, Brighton, Tottenham, Southampton, Halifax, or in nine other of the 76 towns; the annual death-rates therefrom, however, ranged upwards to 3·6 in Middlesbrough, 3·7 in Walthamstow and in Gateshead, and 4·7 in Hanley. The fatal cases of measles, which had declined from 214 to 193 in the four preceding weeks, further fell to 172 in the week under notice; the death-rates from this disease ranged upwards to 2·5 in Walthamstow, 2·6 in Middlesbrough, 3·3 in Gateshead, and 3·9 in Hanley. The 124 deaths from whooping-cough showed a slight decline from the number in the previous weeks, the highest annual rates therefrom being 1·3 in Leyton, 1·5 in Grimsby, 1·7 in St. Helens, and 2·0 in Stockton-on-Tees. The fatal cases of diarrhœa, which had been 51, 47, and 49 in the three preceding weeks, were 50 last week; the proportional mortality was greatest in Oldham, the rate being 1·1 per 1000. The 37 deaths from scarlet fever were seven in excess of the number in the preceding week, and included 13 in London, three in Manchester, and two each in Liverpool, Leeds, Bristol, and Salford. The fatal cases of diphtheria, which had been 48 in each of the two preceding weeks, declined last week to 36, and included eight in London, three in Sheffield, and three, equal to an annual rate of 1·3 per 1000 in Leyton. Of the 11 deaths referred to different forms of "fever," two occurred in London, two in Stockport, and one in each of seven other towns. The number of scarlet fever cases in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2732, 2824, and 2862 at the end of the three preceding weeks, had further risen to 2937 at the end of last week; 389 new cases were admitted during the week, against 382, 437, and 368 in the three preceding weeks. The deaths in London referred to pneumonia and other diseases of the respiratory organs, which had steadily declined from 412 to 186 in the ten preceding weeks, further fell to 149 in the week under notice, and were ten below the corrected average number in the corresponding period of the five previous years. The causes of 46, or 1·1 per cent., of the deaths registered during the week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, West Ham, Bradford, Newcastle-on-Tyne, and 50 other of the 76 towns; the proportion of uncertified deaths, however, showed a marked excess in Liverpool, Birmingham, Sheffield, Hull, and Northampton.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been equal to 16·7 and 19·0 per 1000 in the two preceding weeks, declined again to 17·2 in the week ending June 15th, but exceeded the rate in the 76 English towns by 4·1 per 1000. The rates in the eight Scotch towns ranged from 11·0 in Greenock and 12·6 in Aberdeen to 18·5 in Glasgow and 22·0 in Dundee. The 599 deaths in the eight towns showed a decrease of 61 from the number in the preceding week, and included 83 which were referred to the principal epidemic diseases, against 91 and 109 in the two previous weeks. These 83 deaths were equal to an annual rate of 2·4 per 1000, which exceeded by 0·7 the rate from the same diseases in the 76 English towns; they included 43 which were referred to whooping-cough, 26 to "fever," eight to diarrhœa, five to measles, and three to diphtheria, but not any to small-pox or to scarlet fever. The fatal cases of whooping-cough, which had been 38 and 57 in the two preceding weeks, rose again in the week under notice to 43, of which 30 occurred in Glasgow, seven in Edinburgh, three in Dundee, and two in Aberdeen. The 24 deaths referred to "fever" were two below the number in the preceding week and included 14 cases of cerebro-spinal meningitis in Glasgow, seven in Edinburgh, and two in Leith. The fatal cases of diarrhœa, which had been 14 and 13 in the two previous weeks, further fell last week to eight, of which four were registered in Glasgow and two in Dundee. The deaths from measles, which had been seven in each of the two preceding weeks, declined to five in the week under notice and included four in Edinburgh. The deaths in the eight towns referred to diseases of the respiratory organs, including pneumonia, which had been 82 and 106 in the two preceding weeks, decreased again last week to 91, but were 11 in excess of the number in the corresponding week of last year. The causes of 20, or 3·3 per cent., of the deaths registered during the week were not certified; the proportion of uncertified deaths in the 76 English towns during the same week did not exceed 1·1 per cent.

HEALTH OF DUBLIN.

The annual death-rate in Dublin, which had been equal to 23·1 and 23·9 per 1000 in the two preceding weeks, further

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING MAY, 1907.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1907.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.												
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cerebro-spinal fever.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
LONDON	**4,758,218**	—	**1990**	**739**	—	**82**	—	**24**	**284**	**21**	**3140**	**7·1**	—	**234**	**55**	**64**	**256**	—	**10**	—	**79**	**698**	**1·5**	**6465**	**14·6**	**102**
West Districts.																										
Paddington	149,909	—	31	18	—	1	—	1	18	—	69	4·8	—	5	1	4	5	—	—	—	3	18	1·3	189	13·1	93
Kensington	181,842	—	53	16	—	6	—	1	8	—	84	4·8	—	3	1	3	20	—	1	—	1	29	1·7	240	13·8	165
Hammersmith	122,337	—	34	11	—	—	—	—	5	1	51	4·3	—	6	—	1	10	—	—	—	—	17	1·4	174	14·8	144
Fulham	166,749	—	38	46	—	4	—	1	14	1	104	6·5	—	10	1	4	4	—	1	—	6	26	1·6	187	11·7	95
Chelsea	74,857	—	31	19	—	6	—	—	3	—	59	8·2	—	4	—	1	3	—	—	—	3	11	1·5	112	15·6	113
City of Westminster	172,219	—	39	9	—	6	—	—	15	—	69	4·2	—	2	—	3	8	—	2	—	5	20	1·2	201	12·2	133
North Districts.																										
St. Marylebone	127,718	—	23	8	—	—	—	—	8	—	39	3·2	—	3	1	2	9	—	—	—	3	18	1·5	179	14·6	69
Hampstead	91,137	—	29	13	—	1	—	1	6	—	50	5·7	—	3	—	2	3	—	—	—	1	9	1·0	77	8·8	69
St. Pancras	236,763	—	75	27	—	4	—	—	9	2	117	5·2	—	17	3	2	8	—	—	—	1	31	1·4	346	15·2	109
Islington	347,017	—	106	36	—	9	—	—	23	1	175	5·3	—	20	1	1	19	—	—	—	7	48	1·4	462	14·5	128
Stoke Newington	53,613	—	29	2	—	2	—	—	—	—	33	6·4	—	—	2	—	5	—	1	—	1	9	1·8	75	14·6	102
Hackney	232,993	—	114	32	—	7	—	2	26	—	181	8·1	—	10	8	2	8	—	2	—	5	35	1·6	313	14·0	94
Central Districts.																										
Holborn	55,134	—	17	12	—	2	—	—	7	—	38	7·2	—	1	—	4	4	—	—	—	—	9	1·7	94	17·8	92
Finsbury	96,732	—	59	11	—	—	—	—	10	—	80	8·6	—	7	1	1	8	—	2	—	5	24	2·6	156	16·8	91
City of London	20,310	—	5	2	—	—	—	—	3	—	10	5·1	—	—	—	—	1	—	—	—	—	1	0·5	31	15·9	120
East Districts.																										
Shoreditch	115,662	—	73	24	—	3	—	1	8	—	109	9·8	—	12	4	2	16	—	—	—	2	36	3·2	224	20·2	140
Bethnal Green	130,831	—	79	13	—	3	—	1	28	1	125	10·0	—	7	3	2	11	—	—	—	2	25	2·0	200	15·9	127
Stepney	308,923	—	214	44	—	1	—	1	31	—	291	9·8	—	16	4	1	12	—	—	—	7	40	1·4	439	14·8	92
Poplar	171,086	—	99	52	—	3	—	—	14	2	170	10·4	—	21	5	5	5	—	1	—	2	39	2·4	275	16·8	98
South Districts.																										
Southwark	209,781	—	86	31	—	2	—	1	28	1	149	7·4	—	13	1	1	11	—	—	—	4	30	1·5	357	17·7	119
Bermondsey	128,263	—	61	27	—	1	—	—	14	2	105	8·5	—	4	1	1	12	—	—	—	2	20	1·6	209	17·0	97
Lambeth	318,538	—	90	22	—	5	—	2	21	5	145	4·7	—	18	2	2	19	—	—	—	7	48	1·6	406	13·3	97
Battersea	181,736	—	101	47	—	—	—	1	13	2	164	9·4	—	7	2	5	10	—	—	—	1	25	1·4	211	12·1	88
Wandsworth	281,419	—	117	55	—	6	—	3	17	1	199	7·4	—	11	4	6	14	—	—	—	1	36	1·3	316	11·7	84
Camberwell	277,059	—	106	41	—	5	—	3	22	—	177	6·7	—	9	4	2	22	—	—	—	5	42	1·6	356	13·4	96
Deptford	116,510	—	42	42	—	2	—	1	11	2	100	9·0	—	9	1	2	4	—	—	—	1	17	1·5	144	12·9	115
Greenwich	107,222	—	67	35	—	2	—	1	10	—	115	11·2	—	10	—	2	2	—	—	—	—	14	1·4	134	13·0	100
Lewisham	152,532	—	58	15	—	1	—	2	6	—	82	5·6	—	5	2	1	3	—	—	—	3	14	1·0	148	10·1	64
Woolwich	129,336	—	114	29	—	—	—	1	6	—	150	12·1	—	1	3	2	—	—	—	—	1	7	0·6	130	10·5	77
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

rose to 24·3 in the week ending June 15th. During the first 11 weeks of this quarter the death-rate has averaged 26·3 per 1000, the rate during the same period being 15·0 in London and 17·6 in Edinburgh. The 182 deaths of Dublin residents registered during the week under notice were three in excess of the number in the preceding week and included 12 which were referred to the principal epidemic diseases, against 17, 13, and 11 in the three preceding weeks; of these, eight resulted from whooping-cough, three from measles, and one from diarrhœa, but not any from small-pox, from scarlet fever, from diphtheria, or from "fever." These 12 deaths were equal to an annual rate of 1·6 per 1000, the death-rates during the same period from the principal epidemic diseases being 1·7 in London and 2·0 in Edinburgh. The fatal cases of whooping-cough, which has been ten, eight, and four in the three previous weeks, rose again to eight in the week under notice, while the deaths from measles declined to three, having been four and six in the two preceding weeks. The 182 deaths from all causes in Dublin last week included 28 of children under one year of age and 43 of persons aged upwards of 60 years; the deaths of infants slightly exceeded the number in the preceding week, while those of elderly persons showed a decline. One death from violence and five inquest cases were registered; and 75, or 41 per cent., of the deaths occurred in public institutions. The causes of 11, or 6 per cent., of the deaths in Dublin last week were not certified; in London the percentage of uncertified deaths was 0·3, and in Edinburgh it was 4·6. The 140 deaths registered in Belfast during the week under notice included 15 which were referred to cerebro-spinal fever or cerebro-spinal meningitis.

VITAL STATISTICS OF LONDON DURING MAY, 1907.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 7·1 per 1000 of the population, estimated at 4,758,218 persons in the middle of the year; the rates in the three preceding months were 6·8, 6·6, and 6·9 per 1000 respectively. The lowest rates last month were recorded in Paddington, Kensington, Hammersmith, the City of Westminster, St. Marylebone, and Lambeth; and the highest rates in Shoreditch, Bethnal Green, Stepney, Poplar, Greenwich, and Woolwich. No case of small-pox was notified in London during the month. The prevalence of scarlet fever again showed an increase last month; this disease was proportionally most prevalent in Finsbury, Shoreditch, Stepney, Poplar, Greenwich, and Woolwich. The Metropolitan Asylums hospitals contained 2777 scarlet fever patients at the end of May, against 2829, 2614, and 2586 at the end of the three preceding months; the weekly admissions averaged 368, against 323, 312, and 332 in the three preceding months. The prevalence of diphtheria showed no variation from that recorded in the previous month; the boroughs in which this disease was most prevalent were Fulham, Chelsea, Poplar, Battersea, Deptford, and Greenwich. There were 933 diphtheria patients in the Metropolitan Asylums hospitals at the end of last month, against 916, 1012, and 946 at the end of the three preceding months; the weekly admissions averaged 121, against 126, 136, and 119 in the three preceding months. Enteric fever showed a considerably diminished prevalence in May compared with that in the earlier months of this year; the greatest proportional prevalence of this disease occurred in Kensington, Chelsea, the City of Westminster, Stoke Newington, and Holborn. The number of enteric fever patients under treatment in the Metropolitan Asylums hospitals, which had been 103, 93, and 66 at the end of the three preceding months, had further fallen to 47 at the end of last month; the weekly admissions averaged only nine, against 16, 13, and 12 in the three preceding months. Erysipelas was proportionally most prevalent in Holborn, the City of London, Bethnal Green, Southwark, and Hackney. The 24 cases of puerperal fever notified during the month included three belonging to Wandsworth, three to Camberwell, and two each to Hackney, Lambeth, and Lewisham. Of the 21 cases notified as cerebro-spinal fever five belonged to Lambeth and two each to St. Pancras, Poplar, Bermondsey, Battersea, and Deptford.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various boroughs, the deaths occurring in institutions having been distributed among the several boroughs in which the deceased persons had previously resided. During the five weeks ending June 1st the deaths of 6405 persons belonging to London were registered, equal to an annual rate of 14·0 per 1000; in the three preceding months the rates had been 18·4, 16·9, and 15·8 per 1000. The death-rates last month ranged from 8·8 in Hampstead, 10·1 in Lewisham, 10·5 in Woolwich, 11·7 in Fulham and in Wandsworth, 12·1 in Battersea, and 12·2 in the City of Westminster, to 16·8 in Finsbury and in Poplar, 17·0 in Bermondsey, 17·7 in Southwark, 17·8 in Holborn, and 20·2 in Shoreditch. The 6405 deaths from all causes in London last month included 698 which were referred to the principal infectious diseases; of these, 234 resulted from measles, 55 from scarlet fever, 64 from diphtheria, 256 from whooping-cough, 10 from enteric fever, and 79 from diarrhœa. In addition to these 698 deaths there were seven fatal cases of cerebro-spinal fever, four of which belonged to Lambeth, and one each to Fulham, Bermondsey, and Deptford. The lowest death-rates from the principal infectious diseases were recorded in the Cities of London and Westminster, and in the boroughs of Hampstead, Lewisham, and Woolwich; and the highest rates in Stoke Newington, Finsbury, Shoreditch, Bethnal Green, and Poplar. The 234 fatal cases of measles were 63 below the corrected average number in the corresponding periods of the five preceding years; this disease was proportionally most fatal in Finsbury, Shoreditch, Poplar, Deptford, and Greenwich. The 55 deaths from scarlet fever were 10 in excess of the corrected average number; the greatest proportional mortality from this disease occurred in Stoke Newington, Hackney, Shoreditch, Bethnal Green, Poplar, and Woolwich. The 64 deaths from diphtheria were slightly fewer than the average; among the various metropolitan boroughs the highest death-rates from this disease were recorded in Paddington, Fulham, Holborn, Poplar, and Battersea. The 256 fatal cases of whooping-cough showed an excess of 60 over the corrected average number; this disease was proportionally most fatal in Kensington, Hammersmith, Stoke Newington, Shoreditch, Bethnal Green, and Bermondsey. The ten deaths referred to enteric fever were equal to only one-half of the corrected average for the corresponding period of the five preceding years; of these ten deaths two belonged to the City of Westminster, two to Hackney, and two to Finsbury. The 79 fatal cases of diarrhœa showed a slight decline from the corrected average number; the greatest proportional mortality from this disease occurred in Fulham, Chelsea, the City of Westminster, St. Marylebone, Finsbury, and Stepney. In conclusion, it may be stated that the aggregate mortality from the principal infectious diseases in London last month was about 6 per cent. below the average.

Infant mortality, measured by the proportion of deaths under one year of age to registered births, was equal to 102 per 1000. The lowest rates were recorded in St. Marylebone, Hampstead, Battersea, Wandsworth, Lewisham, and Woolwich; and the highest rates in Kensington, Hammersmith, the City of Westminster, Islington, Shoreditch, and Bethnal Green.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Surgeons: H. W. Hull to the *Pathfinder*, on recommissioning. Civil Practitioners: J. O'Donoghue to be surgeon and agent at Baldoyle and Clontarf and A. G. Price at Greystones.

In accordance with the provisions of Her late Majesty's Order in Council of April 1st, 1881, Fleet Surgeon Alfred Patterson has been placed on the retired list, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets (dated June 11th).

ROYAL ARMY MEDICAL CORPS (MILITIA).

Captain (Honorary Lieutenant in the Army) H. Fox resigns his commission (dated April 9th, 1907).

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion, the Leicestershire Regiment: Surgeon-Lieutenant W. F. McAllister-Hewlings resigns his commission (dated May 9th, 1907). 3rd Volunteer

Battalion the Essex Regiment: Francis James Warwick (formerly Captain, Royal Army Medical Corps (Volunteers)), to be Surgeon-Captain (dated March 20th, 1907). 1st Hallamshire Volunteer Battalion the York and Lancaster Regiment: Surgeon-Lieutenant W. S. Kerr to be Surgeon-Captain (dated May 7th, 1907). 2nd (Renfrewshire) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders): Surgeon-Lieutenant J. C. Herbertson to be Surgeon-Captain (dated March 19th, 1907).

Royal Engineers (Volunteers): 1st Newcastle-on-Tyne: Wilfred Ernest Alderson to be Surgeon-Lieutenant (dated April 26th, 1907).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Eastern Command: Woolwich Companies: Lieutenant-Colonel and Honorary Colonel F. L. Stephenson, on completion of his period of service in command, is retired, with permission to retain his rank and to wear the prescribed uniform (dated April 16th, 1907). Major and Honorary Lieutenant-Colonel C. H. Hartt to be Lieutenant-Colonel, and to command under the conditions of paragraph 47, Volunteer Regulations (dated April 16th, 1907).

Scottish Command: Glasgow Companies: Lieutenant W. Bryce to be Captain (dated June 1st, 1907).

DEATHS IN THE SERVICES.

Brigade-Surgeon James Balfour Cockburn, A.M.D., on June 10th, at Guernsey, in his seventy-eighth year. He entered the service in 1854 as assistant surgeon, became surgeon in 1864, and surgeon-major in 1873, retiring in 1882. He served in the Eastern campaign of 1854–55, including the expedition to Kertch and Yenikale, and was present at the siege of Sebastopol (medal with clasp and Turkish medal). The deceased officer was a Provincial Grand Master of Freemasons in the Guernsey and Alderney District.

THE ARMY ORGANISATION SCHEME.

It is certainly worthy of being put briefly on record that the Territorial and Reserve Forces Bill as amended was discussed in the House of Commons on June 17th, when some important concessions in regard to the retention of the militia were intimated to the mutual satisfaction of the Secretary for War and the Leader of the Opposition. The Bill has now been read a third time in the House of Commons and relegated to the House of Lords for further consideration.

Correspondence.

"Audi alteram partem."

SIR FREDERICK TREVES ON THE PROPHYLAXIS OF DISEASE.

To the Editors of THE LANCET.

SIRS,—Certain imperfectly reported observations of mine, made at the opening of the Isolation Hospital for Infectious Diseases at Preston, have been so distorted in certain journals and have been so further misrepresented in a most objectionable advertisement just issued that I should be glad if you would allow me to refute the ridiculous assertions with which I am credited. I am made to say that "patients should leave off taking medicine when they are sick." I need not say that I made no such preposterous observation. What I did say was this—that in dealing with such maladies as typhoid fever, small-pox, scarlet fever, and tuberculosis the public would be better advised to adopt preventive measures against those disorders than take medicines when they were sick with them.

From this observation I imagine that no medical man would dissent. I further quoted the following passage from Frankland's "Pasteur" (p. 129): "A day will come when in Berlin, in London, in Paris, man will not die of diphtheria, of typhoid, of scarlet fever, of cholera, of tuberculosis, any more than he dies in these cities to-day from the venom of snakes or the tooth of wolves." My solicitors have received from the authors of the advertisement an assurance that it has been discontinued.

I am, Sirs, yours faithfully,

Wimpole-street, W., June 18th, 1907. FREDERICK TREVES.

THE PUBLIC ATTITUDE TOWARDS CONSUMPTIVES.

To the Editors of THE LANCET.

SIRS,—It is certainly high time that an effort should be made to abate the unreasonable attitude of the public towards consumptives to which you call attention in one of the annotations in a recent issue of THE LANCET. You say, "The knowledge of the communicability of consumption from person to person so long disputed, but now so universally recognised, has resulted in a widespread misconception as to the mode of infection, in virtue of which no little hardship is inflicted upon the unfortunate sufferers from that disease," seeing that they are now, as Mr. W. K. McClure has shown, excluded from many first-class hotels in various health resorts.

I venture to think, however, that the medical profession itself is in the main responsible for this exaggerated attitude on the part of the public, owing to the extraordinary change during recent years in its own point of view in regard to this disease. Thirty years ago phthisis was commonly regarded as a generable affection springing up *de novo* in the individual and only in very exceptionable cases was it believed to be communicated from person to person. But the discovery of the tubercle bacillus soon began to lead to a complete change and to the promulgation of doctrines as to the mode of dissemination of the disease which are now gradually being shown to be erroneous.

Thus for a series of years it has been persistently taught that the disease is spread by contagion only, that it never arises *de novo*, and that its spread from person to person, which is regarded as a common process, is solely through the inhalation of tubercle bacilli contained in dust set free from dried sputa. This doctrine has undoubtedly led to a beneficial campaign against a disgusting practice and to the adoption of very desirable precautions in regard to the sputa. But of late years the experimental investigations of Cadéac,[1] as well as other researches, have shown that "the penetration of air-borne particles into the lungs is difficult if not impossible," while at the same time they have demonstrated how little the dried glutinous sputum lends itself to pulverisation and how soon the bacilli contained therein cease to be infective.

Yet this mode of dissemination, now so much discredited, is stated by you to be the only common mode of the spread of the disease from person to person. You say, "It cannot be too generally known that practically the only means of conveying infection from one person to another is from the drying of the sputum and its dissemination as dust containing tubercle bacilli, if we except intimate personal contact, such as kissing or occupying the same bed." If, however, this formerly supposed common mode of spread is, in fact, extremely rare we must all agree with you when you say—and it is an all-important point—"Given the most simple precautions in regard to the disposal of his sputum by the consumptive the danger of infection is almost non-existent."

Further, if the spread of phthisis from person to person is rare, and if infection through the lungs does not take place save in quite exceptional circumstances, it may well be asked, are we to suppose (1) that this terrible scourge comes to us almost only by way of the alimentary canal from the ingestion of infected milk or flesh, and (2) to suppose with Behring that in multitudes of cases tubercle disease germs taken in during childhood are capable of remaining latent for many years in the system; or (3) shall we admit that we have been much too hasty in throwing aside the old doctrine that phthisis is a generable affection, often arising *de novo?* From the latter point of view we have only to suppose that what prove to be tubercle bacilli are often only some of the common bacilli constantly gaining access to the body which, under special conditions, have undergone modifications in property in this or that tissue. Such possibilities will be found reconcilable with many facts otherwise hard to explain. Thus the present Gresham professor of medicine lately said in a discussion at the Royal Medical and Chirurgical Society (Feb. 26th): "Women in Egypt suckled their children for even two years, and all other milk was boiled, and among the cattle tubercle was rare, yet tuberculosis was common." And in my recently published work on "The Evolution of Life" I have in the last chapter indicated how bacteriologists themselves are finding that in

[1] Lyon Médicale, Dec. 10th, 1905.

numerous cases there are transitions both in form and in property between non-pathogenic and pathogenic bacteria.

As another instance showing how opinions are beginning to change at the expense of ultra-contagionist doctrines I may say that quite recently Dr. E. C. Seaton has kindly sent me his annual report as medical officer of health of the county of Surrey, in which after a most careful inquiry into the seasonal prevalence and the distribution of typhoid fever in the county he says (p. 39): "I believe that Dr. Pierce of Guildford and other careful observers in our county could furnish Dr. Bastian with examples of typhoid occurring in isolated country dwellings or under conditions where chances of infection could be definitely excluded." Further, he goes on to express his own opinion in these precise terms: "Personally I agree that cases occur from time to time in purely country districts which it is absolutely impossible to connect with any previous case, and which suggest the possibility of new origin (i.e., apart from human infection) through bacilli other than those which are regarded as the invariable specific cause of typhoid." *Mutatis mutandis* that is precisely what I am contending for in regard to phthisis and other communicable diseases.

I am, Sirs, yours faithfully,

London, June 8th, 1907. H. CHARLTON BASTIAN.

THE MEDICAL SCHOOL OF ST. THOMAS'S HOSPITAL AND THE CONCENTRATION OF EARLY MEDICAL STUDY.

To the Editors of THE LANCET.

SIRS,—At the date of the recent election by the Faculty of Medicine of their representatives on the senate of the University of London, an impression obtained that St. Thomas's Hospital was no longer whole-hearted in support of an Institute of Medical Sciences at South Kensington. This impression is entirely erroneous and in view of the meeting of the faculty summoned for next week it seems desirable that it should be corrected.

St. Thomas's has throughout been consistent in its opinions on this question and still desires to afford its support to the senate in the steps which the University has taken, on the recommendation of the faculty, to establish an institute at South Kensington. The treasurer of St. Thomas's is a member of the committee appointed by the senate to obtain financial help for this scheme; the staff and lecturers continue to give their unanimous support to the proposal; they believe it to be one of the most important steps which can be taken and which are so urgently needed to strengthen the position of the metropolis as the chief centre of medical education in the United Kingdom.

I am, Sirs, yours faithfully,

J. HERBERT FISHER,
Dean of the Medical School, St. Thomas's Hospital.

June 17th, 1907.

BEES' STINGS AND RHEUMATISM.

To the Editors of THE LANCET.

SIRS,—In the course of an inquiry into the relation which I have been led to suppose may exist between certain manifestations of rheumatism and an abnormal production of formic acid in the tissues my attention has been called from time to time to a curious belief which appears to be prevalent in various parts of the country. This very interesting piece of folk lore is to the effect that frequent exposure to the stings of bees (as among bee-keepers) is both protective and curative for rheumatism. My correspondence leads me to conclude that this belief is widely disseminated and is probably familiar to many of your readers.

May I, therefore, be allowed the privilege of making the following inquiries (through your correspondence column) of any of your readers who are sufficiently interested in the question to send me such information as has come within their own knowledge? 1. Have you met with the belief that bees' stings cure or prevent rheumatism? 2. Do you know any case in which a rheumatic subject claims to have benefited in this way as the result of working among bees? 3. Are you acquainted with any reliable evidence which supports or explains the origin of this belief? 4. What were the characters of the "rheumatism" in question?

I am, Sirs, yours faithfully,

E. W. AINLEY-WALKER.

University College, Oxford, June 17th, 1907.

THE SOCIETY OF APOTHECARIES OF LONDON BILL, 1907.

To the Editors of THE LANCET.

SIRS,—This Bill having been passed by both Houses of Parliament now only awaits the Royal Assent to become law. It changes the title of L.S.A. to the more appropriate one of Licentiate in Medicine and Surgery and gives authority to the Society to confer the latter title by diploma on all of its Licentiates who have qualified since June 30th, 1887. Authority is also given to the General Medical Council to enter the new description on the Medical Register. Power is given to the Society to restore (with the consent of the Medical Council) the name of any Licentiate who may have been removed from the roll. Heretofore the Society had only the power to remove a name. The cost of obtaining this Act has been considerable and the council of the Association of Physicians and Surgeons of the Society of Apothecaries undertook to raise £250 towards it. Of this sum £222 5*s.* 6*d.* have been subscribed by the Licentiates, £25 was voted by the Association from its funds, leaving a deficit of £2 14*s.* 6*d.* The expenses of collection amount to £13 1*s.* 9*d.*, bringing the total deficit to £15 16*s.* 3*d.* May I ask those Licentiates who have omitted to send a donation to send their contributions to me without delay? It is scarcely fair that the members of the council of the Association who have had all the hard work, and who have already borne more than their share of the expenses, should also be saddled with this deficit.

I am, Sirs, yours faithfully,

A. RIVERS-WILLSON.

42, Wellington-square, Oxford, June 17th, 1907.

HÆMOGREGARINES IN SNAKES.

To the Editors of THE LANCET.

SIRS,—In the abstract of the paper on Hæmogregarines in Snakes (read at the Pathological Society on June 4th) which you published in THE LANCET of June 15th you omitted Dr. C. G. Seligmann's name, although the paper was in fact a conjoint publication. I should be most obliged if you would mention this in your next issue.

I am, Sirs, yours faithfully,

LOUIS W. SAMBON.

Palace Gardens Mansions, W., June 18th, 1907.

THE WEST LONDON HOSPITAL DINNER.

To the Editors of THE LANCET.

SIRS,—In the account of the West London Hospital and Post-Graduate College dinner given in THE LANCET of June 15th, you say it was under the presidency of Mr. *E.* Lloyd Williams. It is a curious mistake to have made. There is a Mr. E. Lloyd Williams, but I was the chairman of the dinner and am the dental surgeon to the hospital.

I am, Sirs, yours faithfully,

H. LLOYD WILLIAMS.

Upper Wimpole-street, W., June 19th, 1907.

THE ASSOCIATION OF PUBLIC VACCINATORS OF ENGLAND AND WALES.

To the Editors of THE LANCET.

SIRS,—A meeting of delegates appointed by the 37 representative councils of the Association of Public Vaccinators of England and Wales was held in London yesterday. The delegates represented over 3000 members of the medical profession who are public vaccinators and the following was one of the resolutions passed at the meeting:—

That this representative meeting of the public vaccinators of England and Wales emphatically protests against the provisions of the New Vaccination Order, which suggest the reduction of the existing minimum fees to public vaccinators and points out that, although the Departmental Committee reported that if the public vaccinator were made an officer, only removeable with the consent of the Local Government Board and eligible for superannuation, it might be fair to make some reduction of fees; the new Order not only refuses to the public vaccinator the position which is his just claim, and leaves him still under contract without right of appeal; but also reduces the minimum fees for domiciliary vaccination even lower than the committee suggested.

That in the opinion of this meeting it is impossible for the work to be remunerative at the minimum fees in any district in England and Wales under existing circumstances, and that the proposed reduction

would be an instance of sweating of medical men such as can scarcely be exampled in any other branch of the public medical service.

That this meeting looks with the gravest apprehension upon the effect of such inadequate fees as are suggested, feeling that public vaccination in England and Wales cannot be maintained at its present level of efficiency upon such terms.

I am, Sirs, yours faithfully,

CHAS. GREENWOOD.

Mitre-court-buildings, Temple, E.C., June 19th, 1907.

OF MEDICO-LEGAL INTEREST.

To the Editors of THE LANCET.

SIRS,—On June 8th a patient of mine was taken in labour at 1 A.M. with her first child. Her husband fetched the "nurse" at 2 A.M. who said that she "would not be wanted for hours" and left the house. At 5 A.M., while my patient was standing, the baby was born and fell on the floor, the cord breaking. The poor woman jumped into bed, but neither she, the husband, or an old woman in the house knew how to tie the cord. On my arrival at 5.25 I found there had been a good deal of bleeding from the cord, while there was an extensive bruise on the head of the infant. Had my patient been a single woman and had the baby died it is quite conceivable that her story might not have been believed and she might have had to stand her trial for murder. For this reason I think the case is of sufficient interest to justify record.—I am, Sirs, yours faithfully,

June 11th, 1907. A. G. P.

NEW VACCINATION LEGISLATION.

(BY A PUBLIC VACCINATOR.)

THE two principal officials of the Local Government Board have both won their political positions as paid nominees of two of the most highly organised trade unions in England. Perhaps the finished knowledge of trade unionism possessed by both Mr. Burns and Dr. Macnamara has enabled them to gauge the weakness of resistance of a poorly paid but honourable profession which has not yet stooped to trade unionism. Nothing else could have induced these two gentlemen to compel public vaccinators to work for wages which no member of the Amalgamated Society of Engineers or the School Teachers Union would be allowed by those bodies to accept.

Imagine the storm which would have arisen in the House if Mr. Haldane had proposed to Parliament that the wages of the artisans of Woolwich Arsenal should be suddenly reduced from 30*s.* to 15*s.* per week. But without reference to Parliament Mr. Burns lowers in this proportion the earnings of a large body of men by his own personal authority. For though few of the public know that the "Local Government Board" is a non-existent body which never has met, they were reminded of this fact a few weeks ago by Mr. Burns himself, who stated in answer to a question in the House that the Board had never been convened since it was established and he had no intention of ever convening it. Mr. Burns is the "us" of the new Orders and his decisions, issued as Orders in Council, have the effect of Acts of Parliament. They can only be discussed in Parliament on the Estimates, if they are ever discussed at all, and they may be framed, as in the present instance, in direct opposition to the findings of a committee of his own department.

I am well aware that THE LANCET takes no account of politics, but it is inexplicable that such an autocratic method of bureaucratic administration should commend itself to professing democrats like the supporters of the present Government. There is every reason to doubt that the Local Government Board has any intention of protecting the public vaccinators in their struggle for a decent remuneration. The really important, in fact the only important, clause in the new Order is that which reduces the minimum fee for successful vaccination of an infant from 5*s.* to 3*s.* 6*d.* in country districts and to 2*s.* 6*d.* in urban districts of more than 50,000 inhabitants. It may be urged that these fees are "minimum" fees and that larger sums may be paid (as they are now paid) in excess of those minimum fees. But in spite of the recommendations of the Departmental Committee of 1904 the public vaccinators have been given no permanent tenure of their offices. They are therefore liable to termination of their contracts at a month's notice, and where boards of guardians choose to enforce the minimum rate of pay there is no power to compel them to pay more except the Local Government Board, which is Mr. Burns. The agitation in 1904, which led to the appointment of the Commission on Expenses, clearly showed the attitude which was, and will be, adopted by the bulk of boards of guardians, and I regret to say that the new Order indicates too clearly the attitude which will be adopted by the Local Government Board. Consider the work which has to be undertaken and completed for 2*s.* 6*d.* The public vaccinator has to check off and copy Form H which contains four columns of detail and return it to the vaccination officer, then to fill in and send notice of intended visit to each parent to call by appointment on a given day to vaccinate the child, and revisit the case the week after, as well as to fill in and despatch a certificate, and keep a register (which must be filled up every day) containing 19 columns of details. If the parents refuse his services the vaccinator gets nothing for his trouble. If they are out he must call again, and in many districts they always are out, of *malice prepense*. If the child is unfit to be vaccinated the vaccinator must fill in another certificate and call again. The *minimum* number of visits which must be paid is two; the time occupied in vaccination is at least 20 minutes, for scrupulous antiseptic precautions must be observed; and the outgoings in dressings amount to about 6*d.* per head, and an average of 1*d.* per head in postage. From the evidence laid before the Commission it was clear that an average of three and a half to four visits is made by public vaccinators for every fee which they receive, so that in urban districts these gentlemen are to be paid 6*d.* per visit when their out-of-pocket expenses are deducted; in addition to the time taken to reach the child's home, which averages a quarter of an hour each way, the actual operation takes 20 minutes per case and the clerical work 15 minutes, for after vaccination is complete there are forms to despatch as to result and forms for demanding fresh lymph. A trade union joiner earning 5*d.* an hour is better paid.

The subclause (*e*), Article I., 3, is just in principle but goes too far. Under the original Order of 1898, payment was made for each case of vaccination or revaccination irrespectively of the number vaccinated at one sitting and under one roof. This had practically no bearing upon primary vaccination but had a very important bearing in epidemics of small-pox, when whole families were revaccinated together. Thus a vaccinator who received an extra-distance fee of 7*s.* 6*d.* per head for the journey and operation received £3 7*s.* 6*d.* for revaccinating a family of five persons at the same time. This rate of payment was in most instances excessive. But the extravagance might have been entirely prevented if boards of guardians had been properly alive to their powers and established temporary stations in rural districts. They made no attempt to do so, and the Local Government Board made no attempt to instruct them, with the consequence that during the epidemic of 1901–02 the bills for revaccination in many areas were 300 per cent. higher than they should have been. Owing to its obscurity it will be as well to quote *in extenso* the article which seeks to remedy this undue expenditure, and (if I read it aright) it effects its purpose in a trenchant manner.

Article I., 3, (e).—Except so far as this subdivision otherwise provides, nothing in paragraphs (*b*), (*c*), and (*d*) of this subdivision shall apply in any case in which during a period of twenty-four consecutive hours successful vaccination or successful revaccination has been performed by the public vaccinator upon two or more persons at one and the same house, or on any premises (other than the surgery of the public vaccinator) whereon those persons were together present at any time during the aforesaid period.

In every such case the amount to be paid to the public vaccinator shall, in respect of the first person vaccinated or revaccinated, be the sum which being not less than the sum specified in such one of the rules hereinbefore set forth as is applicable to the case of that person is fixed in the contract approved by us, and in force for the time being, or, in any case to which subdivision (1) of Article 5 applies, is fixed by an instrument executed in pursuance of that subdivision, and in respect of every other person vaccinated or revaccinated the amount to be paid to the public vaccinator shall be such a sum as is fixed in the contract approved by us and in force for the time being, or such sum as in any case to which subdivision (1) of Article 5 applies is fixed by an instrument executed in pursuance of that subdivision.

The reference to Article 5 subdivision (1) applies to the article in the Order of 1898, not the present Order, though this fact is not named. If this clause means anything it means that whereas a vaccinator is to get 2*s.* 6*d.* a head for vaccinating at his own house, if he goes elsewhere to revaccinate a family he will only get the 2*s.* 6*d.* for going there and vaccinating the first person and such a sum

for the second and other persons as is to be fixed in the contract. The language may be ambiguous but the intention is obvious; such a sum will be considerably less than 2*s.* 6*d.*, at best it will be 1*s.* 6*d.* By what species of logic a fee of 2*s.* 6*d.* per head is allowed for vaccinating at the vaccinator's own house and a lower fee for travelling an unspecified distance to perform the operation it is difficult to perceive. In Article 3 (*b*) a new rule is issued that children over 12 months' old may at the request of their parents be vaccinated elsewhere than at the homes of the children. This is to save 1*s.* on the procedure, as the vaccinator will only get 2*s.* 6*d.* even in rural districts. But the vaccinator before he vaccinates must have regard to the provisions of subsection (4) Section 1 of the Act of 1898, which is to the effect that he must satisfy himself as to the condition of the house in which the child resides. He is therefore expected to inspect the child's home, at whatever distance, and vaccinate for 2*s.* 6*d.* Article 6 (*a*) contains a new instruction to vaccination officers the use of which is hardly apparent until the meaning is found in the final sentence in Form Q, which reminds the parent that the child will be four months old on a certain date and that unless a certificate be received dealing with the vaccination of the child within a week the child's name will be placed on the list H to be dealt with by the public vaccinator. The final sentence is: "If, however, you should propose some other arrangement for the vaccination of the child I shall be glad to be informed of the same." This is, of course, a clumsy and devious invitation to have the child vaccinated privately in order to lessen the expense of the public service.

In spite of the recommendations of the Departmental Committee that some relief in clerical work should be afforded to public vaccinators none has been given, with the very slight exception of the mechanical rearrangement in certificates B, C, D, and E; in fact, an addition has been made by the auditors of the board to their work of a very irritating character. They are expected to make duplicates of the lists sent them by vaccination officers (Form H) and to send them in with their accounts. This demand by the auditors is in my opinion quite *ultra vires*, as it is not specified in the Orders of 1898. The only attempt in the new Order to relieve the work of the vaccinators is to extend the period within which the child must be visited (after the notice of the vaccination officer that the child has not been vaccinated) from two weeks to four. This relief is practically worthless as regards work which lies at a distance, for the irksome feature of public vaccination is that it must be done by appointment and other work thrown over in its favour if necessary. But neither Members of Parliament nor the officials at Whitehall realise how difficult it is for general practitioners to keep appointments at distances, liable as they are to constant dislocation of any arrangements they may make. Some sensible modification of the clumsy forms of certificates which have been in use for so many years might have been made, but the slight alterations made in certificates B, C, D, and E, and referred to above, are almost valueless. The same useless repetition of places of birth and residence is demanded in spite of the fact that on the same paper is inserted the number of the entry of the child's birth in the registrar's book, which should be sufficient proof of identity in case of dispute.

This Order shows an extraordinary ignorance on the part of the official who issues it of the work performed by vaccinators and ignorance of the immense amount of wasted labour they have to perform and the long distance they often have to travel, for which they get no remuneration. In the scale sanctioned by the late Government this wasted work was considered and a moderate liberality of pay allowed. No attempt has been made to reduce the work, while the fees for urban vaccinators are halved and those of rural vaccinators nearly halved. I have already compared the future wages of the urban vaccinator with that of the second-rate artisan to the advantage of the latter, but the condition of the rural official will in many instances be far worse; the evidence given before the Commission proved conclusively that 30 miles was no uncommon distance to be travelled in connexion with one case. In many districts the minimum fee will be enforced and no support can be expected by the vaccinator from the Local Government Board. The man who is to maintain a stable and drive 30 miles for 3*s.* 6*d.* had better abandon medicine and keep a cab. There are many hard-working men in the large towns who have had practically to give up private practice to attend to their duties as public vaccinators; they are more than middle-aged, they can scarcely hope to build up a fresh private practice, and they are suddenly to be deprived of half their incomes with neither notice nor compensation. For they work in black coats and are not paid weekly wages.

THE GERMAN CONGRESS OF INTERNAL MEDICINE.[1]

(FROM OUR BERLIN CORRESPONDENT.)

(*Concluded from p. 1606.*)

Experimental Investigations on the Production of Leukæmia.

Dr. ZIEGLER (Breslau) said that he had made experiments on animals by exposing the spleen to x rays. He found that the destruction of the follicles of the spleen led to an increase of the mononuclear leucocytes in the blood and that the bone marrow underwent a lymphoid hyperplasia. A partial destruction of the spleen also led to myeloid leukæmia, but of temporary duration only. Destruction of the bone marrow, however, did not give rise to leukæmia. He was of opinion that normal blood was the result of a normal correlation between the spleen and bone marrow and that when this correlation became disordered leukæmia was produced. Injury to either of the two led to hyperplasia of the correlative element of the blood.

Estimation of the Quantity of Blood in the Living Body.

Dr. PLESCH (Budapest) showed some apparatus which he devised for the purpose of measuring the quantity of blood circulating in the living body. He had arrived at the following results. The quantity of circulating blood in the human subject was 5 per cent., or $\frac{1}{20}$th of the weight of the body. The quantity of hæmoglobin in a healthy adult was 0·7 per cent., or $\frac{1}{143}$th of the weight of the body. Referred to the body weight the quantity of blood was from 7 to 8 per cent. in the dog, from 7 to 10 per cent. in the horse, and from 5 to 6 per cent. in the rabbit. Fat individuals had proportionately less blood than lean ones. For chlorotic patients the proportion varied between 7 and 10·8 per cent. of the body weight, while in anæmia caused by severe hæmorrhage it was from 4·6 to 6·6 per cent. In nephritic patients without œdema the proportion was increased to 9·9 per cent. of the body weight.

The Blood Pressure and the Amplitude of the Pulse in Healthy Persons.

Dr. HESSE (Kissingen) using Recklinghausen's tonometer has made investigations of the blood pressure in healthy persons. He found that in the recumbent position the systolic and diastolic pressures were decreased, the diastolic in a higher degree, so that the amplitude of the pulse became smaller. The taking of food and fluids increased the blood pressure and the frequency of the pulse, showing that the work done by the heart was increased. On standing up the systolic pressure was less increased than the diastolic pressure, the amplitude of the pulse becoming smaller. Active exercise of short duration caused an increase of the frequency of the pulse and the diastolic and systolic blood pressure, the work done by the heart therefore becoming greater.

The Influence of Adrenalin on the Heart and the Vessels.

Dr. GROBER (Jena) said that he had administered adrenalin to guinea-pigs for the purpose of examining its influence on the heart and especially on the left ventricle. He found that a long-continued administration of adrenalin produced in addition to other alterations in the organs hypertrophy of the heart. The thoracic aorta became rigid by necrosis of its walls and hypertrophy of the left ventricle was the consequence. This experiment showed that an isolated necrosis of the aorta might produce hypertrophy of the left ventricle.

Dr. FALK said that he had found that the arteriosclerosis produced by injections of adrenalin might be prevented or hindered by the simultaneous injection of other substances, such as bouillon cultures of staphylococcus aureus, oil of turpentine, aleuronat, iodipin, and oil of sesame. All these substances produced an increase of the leucocytes in the blood which very probably had an action

[1] For this report we wish to tender our sincere thanks to the editor of the *Deutsche Medizinische Wochenschrift*, through whose courtesy it has been forwarded to us by our Berlin correspondent.

antagonistic to the process leading to necrosis of the vessels. The necrotising effect of adrenalin was, on the other hand, very much increased by subcutaneous injections of substances such as croton oil and the toxin of staphylococci. A temporary increase of the blood-pressure was necessary as a predisposing or preparatory condition for the alterations of the vessels. Mechanically produced increase of the blood-pressure, together with the injection of other toxic substances, had the same effect as injections of adrenalin.

The Differential Diagnosis between Cardiac Hypertrophy and Pericardial Effusion.

Dr. WOLFFHÜGEL (Landshut) said that even small amounts of pericardial effusion and cardiac hypertrophy might be recognised by the occurrence of characteristic alterations of the position of the anterior borders of the lungs. The examination must be performed with the patient in the erect and in the horizontal positions successively. If in the erect position the lingula was displaced and the right border of the heart was found under the sternum and if in the horizontal position this border was found on the left side of the sternum and the internal border of the superior lobe of the left lung was displaced upwards and to the left a small pericardial effusion was present. If in the angle between the right border of the heart and the liver percussion gave a dull sound which disappeared in the horizontal position and if in this position the left border of the superior lobe was displaced upwards and outwards the diagnosis of pericarditis was absolutely certain and enlargement of the right ventricle was excluded.

Inadvisability of Gymnastic Exercises in Myocarditis.

Dr. WACHENFELD (Nauheim) spoke against the use of gymnastic exercises in myocarditis. He considered that such exercises were not only unnecessary but even mischievous and that gymnastics in every form, whether resistance exercises, or exercises in which mechanical apparatus or electricity was employed, ought to be avoided, especially when the metabolism in the muscular substance of the heart was reduced.

The Secretion of the Pancreas.

Dr. BICKEL (Berlin) said that the pancreatic secretion was dependent on nervous influences, which might either hinder or promote the flow. By offering food to hungry animals the secretion was increased but if the animals from any cause became angry it was hindered. Apart from dietetic considerations the secretion might be affected by drugs and mineral waters. Secretin, hydrochloric acid, pilocarpine, alcohol, tincture of cinchona, and solution of common salt had the effect of promoting the secretion, whilst atropine, morphine, opium, bicarbonate of sodium, sulphate of magnesium, sulphate of sodium, and most of the alkaline mineral waters hindered it. The secretion of the pancreas depended in some degree on the production of hydrochloric acid in the stomach, and if this latter function was interfered with the pancreas suffered also—a circumstance which must be considered in the treatment of the disorders of digestion.

Dr. ERNST MEYER (Halle) recommended for rectal feeding an enema of cream mixed with pancreatic juice, by which means a better absorption of the cream was obtained. An enema consisting of cream, peptone, and pancreatin had a high calorific value; it was easily prepared and did not irritate the intestine.

The Importance of Water for the Physiological Disintegration of Fat.

Dr. HEILNER (Munich) said that by experiments conducted in Voit's respiration chamber it had been proved that the administration of water to a hungry dog increased the physiological disintegration of fat by about 9 per cent. and also increased the nitrogen in the urine. These phenomena were absent when the water administered was required in the organism for some other definite physiological purpose. This was the case when, together with 150 grammes of water, 32 grammes of dextrose were given, so that the water was used to dissolve the latter; similarly when water was given to animals at a temperature of 33° C. in the chamber it served to replace the water lost by perspiration. The conditions were nearly the same for the physiological disintegration of albumin. From this it might be inferred that an abundant supply of water had a specific dynamic action on the katabolism of the living tissues.

The Digestion of Albumin in the Body.

Dr. LOMMEL (Jena) said that after a dog had received an intravenous injection of pig's serum the nitrogen appeared in its urine in the form of urea. Dogs, however, did not assimilate the albumin of an animal of their own species, and if such albumin was administered, even in great quantities, to hungry dogs the nitrogen of it did not appear in their urine in the form of urea. It had been found that graminivorous animals assimilated the serum of animals belonging to other species only after being immunised against it. Dogs, however, assimilated the serum of animals belonging to other species at once.

Chronic Poisoning by Manganese.

Professor JAKSCH (Prague) said that he had described in the year 1901 three cases of poisoning by manganese, the principal symptoms being convulsive laughing and crying, walking backwards, exaggeration of the reflexes, and symptoms of mental aberration. In 1902 a new case came under his observation in which, instead of the convulsive laughing and crying, the patient's face showed a mask-like expression. In 1907 a workman employed at the same factory from which the other cases had come presented himself. He was in a state of great mental excitement, walked backwards, and had the characteristic gait of manganese poisoning. Convulsive laughing and crying were absent. The visual field was greatly reduced. The patient recovered within 20 days under the use of high-frequency currents. Possibly the case was one of a functional neurosis—manganophobia. The toxic effects were produced by the manganous salts only.

Myasthenia Pseudoparalytica and Hyperleucocytosis.

Professor PEL (Amsterdam) mentioned the case of a woman, 38 years of age, who showed the symptoms of Erb's disease, including the characteristic physiognomy, ptosis, diplegia facialis, dysphagia, difficulty of utterance, myasthenic reaction, and attacks of dyspnœa, but no atrophy of the muscles. The cause of her illness was extreme physical over-exertion, combined with mental depression. A remarkable feature of the case was that on the days when the patient felt dull and miserable there was an enormous increase of leucocytes in her blood, the number reaching 16,000 in a cubic millimetre, whereas on the days when she felt tolerably well there were only from 6000 to 7000 in a cubic millimetre. Professor Pel was of opinion that this leucocytosis was caused by chemotaxic poisons, which had also an unfavourable effect on the general state of the patient.

The Treatment of Aphasia.

Dr. GUTZMANN (Berlin) said that the results of the treatment of aphasia by systematic exercises even in elderly patients were generally good. Exercises should be begun when the aphasia had continued for three months or six months, provided that the general state of the patient was good and the intellect clear. Young persons, of course, gave better results, but patients between 40 and 50 years of age had been successfully treated. Neither the duration nor the intensity of the aphasia was a contra-indication against the exercises and Dr. Gutzmann mentioned a case in which he had successfully treated cortico-motoric aphasia of ten years' duration.

Neuroses of Military Men after a Campaign.

Dr. HONIGMANN (Wiesbaden) described under the name of "Kriegsneurosen" nervous troubles observed by him in Russian officers who had been wounded during the war with Japan. The symptoms were—like those observed in traumatic neurosis or the "railway brain" of civilians—partly of a neurasthenic and hysterical, and partly of a hypochondriacal character (hysterical monoplegia, hyperæsthesia, hypoæsthesia, and hemianæsthesia). In many cases the nervous troubles depended on physical alterations of the central nervous system although not on local affection of the brain. The treatment of these nervous troubles had generally a better result than in cases of traumatic neuroses after accidents in factories or workshops.

The Influence of Certain Drugs on the Temperature of the Living Body during Exposure to Heat.

Dr. WINTERNITZ and Professor VON MERING (Halle) said that they had examined the course of the body temperature during exposure in an electric light bath with and without the administration of antipyretics, such as phenacetin and salicylate of sodium. They had found that the temperature was the same in both events. It was therefore proved that on exposure to a high temperature the thermo-emissive power of the body was so adjusted that no further effect

was produced by antipyretics. Injections of atropine and pilocarpine had no influence on the temperature, a fact which proved that what influenced the temperature was not the visible liquid perspiration but a certain degree of moisture of the skin which was not suppressed by atropine.

SOME TURKISH LAZARETS

AND OTHER SANITARY INSTITUTIONS IN THE NEAR EAST.

BY THE BRITISH DELEGATE ON THE CONSTANTINOPLE BOARD OF HEALTH.

(With Reproductions of Photographs taken by the Author.)

VII.[1]

THE CAMARAN LAZARET (*continued*).

Means of Communication.—Lack of Telegraphic Communication with the Mainland; New Cable since Laid Down.—The Telephone.—The Décauville Railway and Rolling-stock.—The Machinery Building and its Contents—General Depôts; Coal Depôt.—Installation for Manufacturing Bricks, Tiles, Concrete Blocks, &c.—Proposals Connected with the Administration of the Lazaret.—The Value of the Indian Rupee.—Total Estimated Cost of the Proposed New Works.—The Sanitary Control of Ships Carrying Pilgrims to and from the Hedjaz.

THE successful working of a large institution like the Camaran lazaret must depend to a considerable extent on the presence of efficient and rapid means of communication—firstly, between the lazaret and the central controlling body in Constantinople; and, secondly, between the different portions of the lazaret itself.

Formerly the island of Camaran was connected with the Arabian mainland by a telegraph wire. Telegrams from Constantinople went by way of Perim to Sheikh Said (on the mainland opposite Perim) and thence to Hodeidah and Camaran. The cable crossing the straits from Ras-el-Bayadh to the island was laid down in February, 1893. It seems to have worked well for about five years, indifferently (requiring constant repair) for the next three years, and in 1902 it stopped working. In 1903 the cable was taken up and found to be in a very bad condition; some incomplete repairs were effected but a month later communication was again interrupted and a little later still the cable was removed altogether. At the time of the Commission's visit to Camaran the island was quite cut off from the mainland and telegrams had to be sent to and from the latter by sambouk. The delays were serious not only at that end of the line but also, it would seem, elsewhere, and it sometimes took three, four, or five days for a telegram to pass between Camaran and Constantinople. The representations on this point made by the Commission on its return have had satisfactory results: the cable between the mainland and Camaran has been relaid and better arrangements have been made. The result is that telegraphic communication between the lazaret officials and the central administration in Constantinople is now both much more certain and much more rapid than it was in the early part of the year, and the gain in efficiency in the administration of the lazaret should be correspondingly great.

For the purposes of internal communication between different parts of the lazaret itself there exists at present only the Décauville railway. There was formerly a telephone system connecting the central offices with the medical man's house in each cordon. It was put up in 1896, but for lack of skilled attention it has ceased to work; indeed, the only traces of it left are a few of the receivers much spoilt by the climate. The Commission proposes to re-establish the telephone system connecting the central offices with each cordon, with the three disinfecting blocks, and with the hospitals, and to put it in charge of a skilled employee who will be responsible for its proper working and upkeep.

The railway is a Décauville line, of 60 centimetres (about 2 feet) gauge. It has been in use for some nine or ten years and has suffered considerably from the action of the climate and of the salt and often damp sand on which it is laid. Much of it is to be relaid, and two kilometres of new lines have been bought and are being gradually put down in place of the old. The new lines weigh nine kilogrammes the metre, the old ones only five; it will thus be possible to run a small engine on the new line if desired, an improvement that it was impossible to introduce on the existing one. A large new building is also being put up to shelter the rolling-stock in place of the poor arish sheds hitherto employed for this purpose. The rolling-stock consists of 17 coal-trucks (two capable of holding half a ton, and the other 15 of one ton capacity each); 42 trucks for carrying the pilgrims' luggage (some of them are seen in Fig. 26); 11 tanks for sewage removal (as described in Article V.); one pump on wheels for use at the cesspools; two carriages for the use of the *personnel*, one of six places and the other of three; and four water-cisterns. In addition there is the moveable disinfecting stove mentioned in Article III.; and a crane mounted on a truck, the wheels of which are, however, too wide apart to run on the existing line. At present manual labour is employed to push these various objects along the line; the question of the purchase of a locomotive is adjourned for the present. With the disappearance of the existing system of excreta disposal and the reduction of the whole length of the railway will be very greatly diminished. Its plan also will of necessity be somewhat modified, with the modification of the general plan of the lazaret, as described in earlier articles. Branches will run from the head of each landing jetty to the disinfecting blocks; the main line will connect the latter with the cordons, and these with the central administrative buildings; and other branches will run to the hospitals, the Mervani jetty, and other outlying portions of the lazaret.

FIG. 26.

The Décauville railway; trucks with pilgrims' luggage.

The remaining buildings of this lazaret do not require any lengthened description. The large stone structure known as the "machinery building" stands on a cliff close to the northern shores of the Camaran Bay. It contains the distilling apparatus, the ice machine, the pump for raising sea water, and the generators and motors for working these machines. In an annexe is the forge; and there are several other rooms, two of which are occupied by the head engineer, and one is a workshop containing drills, circular saws, lathes, and other instruments, all of which are worked by steam. These various machines are of the greatest use in the repair and upkeep of the distilling and ice apparatus, the railway, the stores, and the many other installations of the lazaret.

There are several large store-rooms (*magasins*) in the lazaret. One occupies the ground floor of the residency described in Article VI. Another is a large stone building, with iron roof, on the Mervani plain. An almost identical building is used for a coal-store; it is situated close to the Mervani jetty; it can hold as much as 500 tons of coal and a branch of the Décauville railway enters it at one end and leaves it at the other. There are also several arishes used as stores.

Finally, the only group of structures that need further

[1] Nos. I., II., III., IV., V., and VI. were published in THE LANCET of April 27th (p. 1188), May 4th (p. 1251), 11th (p. 1317), and 18th (p. 1389), and June 1st (p. 1518), and 8th (p. 1607), 1907, respectively.

mention are those connected with the manufacture of various building materials employed in the original construction and in the upkeep of the lazaret. When the "réfection" of this lazaret was undertaken some ten years ago a series of costly machines was installed on the island with the object of preparing on the spot the bricks, tiles for roofing, floor-tiles, concrete blocks, and other materials required for the new buildings. Most of these machines still exist, though they are now rarely, if ever, employed. The bricks manufactured on the island never proved very satisfactory, and as an excellent building stone is found in practically unlimited quantities on the island itself and on the adjoining mainland the Commission recommends that in future all "pucca" buildings shall be constructed of stone. A considerable stock of unused bricks exists in this portion of the lazaret; many of them are of bad quality but the good ones can be employed for inner walls in the new buildings that it is proposed to put up. In the climate of Camaran bricks do not seem to do well for outer walls; when so employed it has always been deemed necessary to cover them with a thick coating of lime plaster, as they crumble away if exposed to the air. But (as shown in several of the illustrations that have appeared in earlier articles) the plaster tends to fall off, leaving the bricks exposed all the same. In some buildings, notably in many of the latrines in the cordons, the outer coat of plaster has completely disappeared and the brick walls are crumbling to pieces. In other buildings, where better bricks and perhaps better plaster have been used, the condition is less marked. The falling of the plaster is further contributed to by the absence of a damp-proof course in any of the buildings. This expedient of preventing damp in outside walls seems to be quite unknown in this country. The tiles for roofing and flooring and the concrete blocks (for the jetties, &c.) manufactured at Camaran have given rather better results than the bricks.

This completes the description of the principal buildings and installations of the lazaret of Camaran. The Commission's report deals, however, not only with the buildings and installations and proposals for their improvement and completion, but also with a large number of questions of various kinds connected with the administration of the lazaret. Several modifications are proposed in the *personnel* of the institution, the most important of which are the nomination of an assistant director, the assigning of definite responsibility to individual employees for the upkeep of the various buildings and installations, and the formation of squads of trained labourers to be placed under the orders of those employees. The lazaret as a whole has hitherto suffered considerably from insufficient attention to the upkeep and repair of the buildings of which it is composed; the Commission lays great stress on this point and makes a series of recommendations for remedying the defect in future. Among other things it advises placing at the disposal of the director a sum of P.3000 (£T.30) a month for urgently needed repairs and purchase of materials, a sum which he will be at liberty to spend without asking the preliminary consent of the Constantinople Board of Health (which often causes delay) and on the sole condition of accounting satisfactorily for its expenditure at the end of the month.

Another valuable result of the Commission's labours has been in connexion with the rate of exchange of the Indian rupee when taken in sanitary dues at Camaran or Jeddah. Hitherto that coin has been taken at the value of only 5½ piastres (11*d.*), whereas its real value is 16*d.*, or 8 piastres. Its exchange value with the local sarafs, or money-changers, varies between 7 and 7¼ piastres. Its being taken at the low rate of 5½ piastres by the sanitary authorities caused a very serious loss to Indian pilgrims (who are called upon to pay over 70 piastres for ten days' quarantine). Moreover, the marked difference in the two local values of the rupee led to no little speculation and abuse. This will now be

FIG. 27.

Deck of a pilgrim steamer approaching Yanbo.

done away with, as the Board has decided to take the rupee for quarantine dues at 20 paras (1*d.*) less than the local rate of the day with the money-changers. It will henceforth, therefore, be taken at from 6½ to 7¼ piastres, instead of 5½ as hitherto.

Estimates of the cost of each new work proposed are added in the Commission's report. It will suffice here to mention the total sum, which is placed at £T33,000, or £30,000 sterling. Detailed recommendations are also made as to the best method of carrying out the new works. It should further be added that the majority of the proposals made by the Commission have been approved and adopted by the Board of Health and that several of the more urgently needed works (involving an outlay of some £3000) are to be put in hand at once. For the other more costly works new credits will have to be obtained and this must necessarily involve a certain amount of delay.

In this and the preceding articles I have dealt at considerable length with the great lazaret of Camaran. It is in that lazaret that the large majority of pilgrims coming to the Hedjaz from beyond the Straits of Bab-el-Mandeb undergo a period of quarantine together with the other measures described in an earlier article. During that period the ships which take them to the island are thoroughly cleansed and disinfected, and the crews are landed and undergo a douche-bath, while their clothes pass through the disinfecting stove. At the expiry of the quarantine period the pilgrims are once more put on board sambouks and sail or are towed back to their now clean and disinfected steamers. From Camaran the steamers proceed directly to Jeddah; the voyage lasts about 48 hours. A few words may be said here as to the sanitary control of the pilgrim ships themselves.

The sanitary condition of the pilgrims during their voyage to the Hedjaz ports is mainly regulated by a code of rules known as the "Règlement spécial applicable au Pèlerinage du Hedjaz," which is annually revised by the Constantinople Board of Health. Ships sailing from Indian ports, which form a considerable majority of all pilgrim ships from the south, come under a set of regulations issued by the various Indian Governments under the title of "General Instructions for Pilgrims to the Hedjaz," which are based mainly on two Acts, the Pilgrim Ships Act of 1895 and the Bombay Protection of Pilgrims' Act of 1887. These various codes of regulations correspond very closely in their main provisions with the rules embodied in successive international sanitary conventions, and codified in the last convention, that of Paris, 1903. These rules deal with such questions as the amount of space allotted to the pilgrims between decks (in most instances 16 square feet per pilgrim); the provision of latrine accommodation, of water-supply, of hospital beds, of a distilling apparatus and a disinfecting stove, questions concerning the fitness of the ship to go to sea, the presence of fire-extinguishing apparatus on board, and many other similar questions.

A considerable number of pilgrim ships contravene one or more of these rules each year, but it is satisfactory to note that the Indian Acts and regulations are very strictly enforced and that the ships taking pilgrims from Indian ports—as also those from Further Indian ports—are among the cleanest and most sanitary of all steamers going to the Hedjaz. Fig. 27 shows the deck of a small pilgrim steamer of some 450 tons; it was the steamer by which I travelled from Jeddah to Yanbo and the photograph was taken at the moment of arriving at the latter port.

(To be continued.)

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Schools for the Feeble-minded.

AMIDST the clamour and the clangour of the controversies raging round and about the education question it is cheering to turn to the good work done in Manchester to help those whose mental feebleness calls for sympathy and whose future should give thought to those anxious to avert the mental and physical degeneracy that threatens a large section of the nation. The fourth annual report by Dr. H. Ashby, who has from the first given most valuable help to the scheme, addressed to the Manchester education committee, gives some valuable and interesting information as to the schools for the feeble-minded and for cripples. There are three of these special day-schools in Manchester, in one of which there are at present 90 children and in the two others 80 and 95 respectively. In addition to these 40 mentally defective children are inmates of the Sandlebridge boarding schools belonging to the Incorporated Lancashire and Cheshire Society for the Permanent Care of the Feeble-minded and 43 suffering from epilepsy are at the Manchester David Lewis Epileptic Colony School, near Alderley Edge. There is also at Swinton House a residential school for the physically defective in which the accommodation was increased during 1906 from 30 to 60 beds. At the close of 1906 at the three schools for the mentally defective there were 238 in attendance, 159 boys and 79 girls. Dr. Ashby pays a warm tribute to the teachers in these schools, and it may well be imagined what "enthusiasm and interest" must be required in this special work. If these qualities are absent the more than usual trials and discouragements must be almost heart-breaking, but Dr. Ashby says that "the teachers have interested themselves not only in the education of the children but in every phase of their lives, whether at school or at home." It was at first difficult to persuade parents to send their children to a special school but that difficulty is lessening and the time is looked forward to when parents will recognise the value of these schools. But there is a class of children lower in mental power than those for whom these schools are doing such good work; and the question is asked, What must be done with these? They do not benefit or gain lasting advantage by attendance at a day-school. They come up for examination in considerable numbers, most of them have to be rejected but some are admitted in hope of their improvement, but it generally turns out that even these have to be discharged. It seems hard to refuse admission or to discharge them afterwards, but Dr. Ashby's experience is that "the lower class defective learns nothing, or next to nothing, of the value of figures or words, even after a year or more of teaching, and time given to them, in these respects at least, is largely thrown away." But he remarks that they improve in conduct and behaviour and some of them in manual work. In his opinion the only solution of the question is "in the establishment of residential institutions, where the education and training would be purely manual, where the inmates by their work would make some slight contribution towards their maintenance." Without such care these children, as he says, are certain to "drift into the workhouse or recruit the criminal or chronic inebriate class." These degenerates, moreover, reproduce their kind which should be prevented, so that it becomes a matter of urgency to care for them during their whole lives. Dr. Ashby speaks encouragingly of the brighter children who in the course of time have learned to read an infant primer fluently, to add and to subtract sums of money, and to write a fairly good hand. But with them also the greatest advance has been in manual work, their drawing, moulding, woodwork, and knitting being "most creditable." As regards their future, "the great thing to recognise is their capacity for manual work under supervision." Dr. Ashby advocates the teaching of the simpler handicrafts by practical men to boys of from 14 to 16, and "domestic economy" to girls. This seems the most hopeful direction to take with these unfortunate derelicts. Last summer 80 of the children spent a happy fortnight at the country school at Mobberley, with much enjoyment and to their great benefit, and the experiment will be repeated this year. At the Swinton School for Cripples there were 63 inmates in all during the year. For the most part they were of average mental ability but backward from having had little or no systematic instruction. The greater number suffered from spinal or hip disease. Some few leave sufficiently well to go to work; some become too ill to learn, while others have to go to hospital, and if sufficiently recovered return to school. Very little medicine and no alcoholic beverages have been taken, while the food is plain and plentiful. Much more might be said of the efforts made to brighten the lot and to improve the prospects of these poor children, but the schools show what a wide field exists for the exercise of a sane philanthropy that will not only cheer the sufferers but will bring back in return many advantages to the country.

Street Accidents.

Three children were killed in Manchester the other day, and at the inquests held on June 17th it came out that the manner of their deaths was a very common one. The first, aged 16 months, was playing on the doorstep, but

went to the roadway where he was knocked down by a lorry, run over, and killed. The second, aged three years, was playing on the footpath with her brother, when she ran in front of a post-office mail van, was run over, and died while being taken to the infirmary. The third, aged one year and nine months, was playing in the street and was knocked down by a lorry and killed. In none of the cases was the driver held to be blameable, and the coroner said it was not fair to them that parents should allow their children to play in the streets. But what are the parents in the "mean streets" to do? There are no playgrounds near to which the children may be taken. The mother, either from necessity or mismanagement, has, in many cases, to leave to others the care of her children while she is working. The obvious solution would be to provide more open spaces in poor neighbourhoods where the children would be safe, and perhaps to make it a punishable offence for parents or caretakers to allow these little children to play in the streets.

Old Rum Casks.

A rather unusual death from "misadventure," according to the verdict, occurred just lately. A Bury dyeing company bought some old rum puncheons which were left out of doors and the rain got into them. On the next day the man in charge drew off the liquid and took it home and at night he and some friends drank it in his greenhouse. All were affected by it and one became unconscious, was taken home on a wheelbarrow, and died about midnight. At the inquest a medical man attributed the death to acute alcoholism. The rum, as it must be called, was said to be between 28 and 30 points overproof. Old rum casks seem to retain for a long time their evil potency.

On Children's Processions and Excursions.

In an address given recently in Manchester Dr. A. C. Magian made some judicious remarks on the processions of children, that are supposed to be enjoyable and enjoyed, during Whitsun week. Whatever the weather may be they assemble in their thousands in Albert-square and afterwards walk through some of the principal streets. There is what looks almost like rivalry as to which of the religious bodies can show the greatest number, but it is judiciously arranged that members of the various bodies shall not walk on the same day. The same objections apply with even greater force to the long railway excursions it is now common for the schools to make at Whitsuntide. Those who have seen the poor little things, dressed often in the flimsiest clothes and with poor thin shoes, tired, wet, and cold, if the day should be damp or if it rains, as it not infrequently does in the neighbourhood of Manchester, will readily believe Dr. Magian's statement that he knew for a fact that hundreds of children had caught colds, if nothing worse, during Whitsun week and he was certain that many of these would develop pneumonia and other serious diseases. There is no doubt that the children look forward to these processions and excursions and invest them with all the delightful anticipations that the child mind can picture, but the anticipated pleasure turns out in very many cases to be a painful experience.

June 18th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Epilepsy: Work of the Home for Epileptics at Maghull.

THE annual meeting in connexion with the home for epileptics at Maghull was held on June 15th, when a large party of ladies and gentlemen were afforded an opportunity of visiting the institution and seeing for themselves the excellent work which is being carried on in the treatment of epilepsy. The Lord Mayor of Liverpool presided. Mr. J. R. Paton, who was unable to be present, sent a cheque for £100. The eighteenth annual report stated that 19 males and 17 females had been admitted during the year, the total number in the home on Dec. 31st, 1906, being 209, classified as follows: First class patients, five; second class, 52; intermediate class, four; and third class, 148. The usual kinds of work had been followed, that for the men being outdoor work in the fields and gardens whenever their physical condition allowed. Such men as were not physically equal to the hard work and exposure to weather which agricultural work called for were engaged indoors or under cover at joinery, &c., or as porters or messengers between the homes. The women, too, were engaged when possible in gardening, but for the most part the domestic work of the home, the laundry, the kitchen, and duties arising out of these fully occupied their attention. Hardly any of the patients had any knowledge of agricultural work before going to the home, but after a course of training and under effective supervision they were shown to be capable of doing satisfactory work. The farm supplied the home during the year with all the milk and vegetables required, as well as with a certain amount of bacon, eggs, and poultry, the total value of the food thus furnished for its own use being £690 and the outside sales £832. The farm account, unfortunately, showed a loss this year. The plan of making a small weekly allowance to those workers who had acquired some skill and did their work steadily proved advantageous, and gave a much-needed stimulus to the patients, who were without the motives urging to steady and continuous effort which act as an incentive in ordinary life. In the day school the young patients were taught "the three R's," kindergarten, light basket-work, &c. The children had also made collections of wild flowers and had learnt the names, and showed interest in their small gardens. In the evening continuation classes during the winter months there were about 153 adults on the register and the attendance and conduct were very good. The receipts from patients showed a considerable falling off, owing to the temporary reduction in the number of the first-class patients; but, on the other hand, economies had been effected and the maintenance account had worked out satisfactorily. The committee had now felt compelled to consider the question of making further provision for children, and it had been decided to erect a home to accommodate 30 boys and 30 girls at an estimated cost, including furniture, of £8000. Sir James Crichton-Browne, who was especially invited, addressed the meeting and said that the Maghull home was the first institution established for epileptics in this country, and, therefore, the pioneer in a work that was still greatly in need of extension, and he was present to show his appreciation of the admirable methods pursued in it. His impression was that epilepsy was increasing; the modern modes of life were more and more conducive to the instability of the brain and the higher nerve centres out of which epilepsy sprang. Already they were in possession of remedies which materially reduced that instability and explosiveness of the brain which gripped them. He particularly rejoiced to find in that home a medical staff who were animated by the true scientific spirit and took no despairing view of the evil with which they had to cope. Dr. William Alexander was satisfied by clinical and pathological observations that epilepsy was a curable disease and he quite agreed with him. It seemed to him that Dr. Alexander was on the right track, and should he succeed then the Maghull home would have conferred inestimable blessings on suffering humanity. Among the other visitors were Sir Edward and Lady Russell, the rector of Liverpool (Canon Kempthorne), Dr. William Carter, and Dr. J. M. Rhodes (Didsbury).

June 18th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

The Midwives Act in Cardiff.

THE Midwives Act is administered in Cardiff by the health committee of the city corporation with the medical officer of health, Dr. E. Walford, as executive officer. A woman inspector, who is a certificated midwife and is on the staff of the sanitary department, visits the residences of the registered midwives in the district and supervises their practice. During 1906 she found that among the 117 midwives on the register 85 had provided themselves with a case book, record book, washable dresses, a bag, and appliances. Of the remainder all but seven had case books and all but 11 had record books. 20 did not have washable dresses, bags, or appliances and four had not provided themselves with any of the articles required by the regulations of the Central Midwives Board. A course of training for midwives has been established by the University College of South Wales and Monmouthshire, instruction being given by Dr. Ewan J. Maclean, lecturer on midwifery to the College. During 1906 the course was attended by 38 pupil midwives from Cardiff

and 50 from elsewhere. Practical training is also given in the maternity department of the Queen's Nursing Institute.

The Temple Memorial Home for Inebriates.

A home for male inebriates, which has been established by the Church of England Temperance Society at Cinderford in the Forest of Dean, was formally opened by the Bishop of Gloucester on June 11th. The house and surrounding grounds of 27 acres were purchased from the Crown. The total expenditure, including furnishing and alterations, has been about £5000, a sum which has been raised by voluntary subscriptions. The institution, which is intended to be a memorial to the late Archbishop of Canterbury, will replace a somewhat smaller home which has been established about seven years at Battle in Sussex. There is accommodation at Cinderford for 55 men, some of whom pay a weekly sum of 25*s.* and others 10*s.* 6*d.* There will be a domestic staff of seven persons, of whom five are men. As far as practicable employment will be found for the inmates. The report of the home at Battle for the year 1906 shows that during that period the institution was nearly self-supporting; indeed, if the patients had paid an additional 5 per cent. it would have been quite self-supporting. Of the 46 patients who left the home in 1906 it is said that 14 had been heard from and were believed to be doing well. The average time of stay in the home was nine months. The Cinderford house is now the only home for men which is administered by the Church of England Temperance Society, but the society has homes for inebriate women in different parts of the country, one being situated in Norfolk, one in Torquay, one at Herne Hill, and a fourth near Birmingham. The results at all these institutions are considered to be satisfactory.

An Action for the Recovery of Medical Fees.

In Camelford county court on June 13th Mr. E. J. Jerome of Camelford sued a lady for £43 for medical attendance on her brother. Evidence showed that the defendant had written and asked Mr. Jerome to attend her brother and that her solicitor had sent him sums of money on account. For the defence it was urged that the defendant was not responsible and that the charges were excessive; £25 had been offered in settlement but this the plaintiff had refused. His honour gave judgment for the full amount with costs, remarking that as the defendant had asked Mr. Jerome to attend her brother he was justified in looking to her for payment.

June 18th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Changes on the Staff of the Royal Infirmary, Edinburgh.

OWING to two members of the honorary staff—namely, Dr. Alexander James, senior ordinary physician, and Dr. C. W. MacGillivray, senior ordinary surgeon—having completed their term of office the managers have promoted Dr. William Russell, senior assistant physician, and Dr. J. W. B. Hodsdon, senior assistant surgeon, to fill the vacancies thus formed. Vacancies have thus been made for a new assistant physician and a new assistant surgeon. The candidates for the assistant physiciancy are Dr. Edwin Bramwell, Dr. W. T. Ritchie, Dr. D. Chalmers Watson, Dr. Edwin Matthew, Dr. J. D. Comrie, and Dr. J. Eason; and for the assistant surgeoncy Dr. J. W. Struthers, Dr. H. Wade, and Dr. W. J. Stuart. These posts are to be filled up this month but all the appointments mentioned date from Sept. 1st next.

Presentation to Miss Spencer.

At a meeting of managers of the Edinburgh Royal Infirmary held on June 10th, Miss Spencer, on her retirement from the post of lady superintendent, was presented by the members of the board with a silver tea service and tray "as a token of their high appreciation of her most efficient, valuable, and devoted services to the institution during 30 years, first as assistant lady superintendent and then for the past 20 years as lady superintendent of nurses."

The Health Report of Edinburgh for 1906.

This report has just been issued by the medical officer of health, Sir Henry D. Littlejohn. It contains some interesting statistics. The death-rate was 14·26 per 1000, practically the same as in 1905. The highest mortality was in the fourth week of November and the first week of April. The birth-rate was 22·41 per 1000; in 1901 it was 24·99; in 1891, 28·25; in 1881, 32·23; and in 1871, 34·89. Of the total deaths amounting to 4868, 862 were of infants under one year of age. As regards causes of death, tuberculous disease caused 591 deaths, as compared with 640 and 654 in the two preceding years; pneumonia caused 482 deaths and cancer 330; the deaths from the zymotic diseases were 258, as compared with 328 in 1905 and 690 in 1897. No deaths occurred from small-pox. The notifications of infectious diseases numbered 2147. The report is altogether one with which the city and its health officer may well be satisfied.

Complimentary Dinner to Dr. J. M. Beattie.

Dr. J. M. Beattie, who has for a number of years been senior assistant in the pathological department and also lecturer in bacteriology in the University of Edinburgh, was entertained to dinner by a large number of his friends as an expression of goodwill on the eve of his leaving Edinburgh to take up the duties of professor of pathology in Sheffield. Dr. P. A. Young occupied the chair in virtue of his being president of the Australasian Club. The toast of the evening was proposed by Professor W. S. Greenfield who spoke in highly appreciative and affectionate terms of Dr. Beattie. Sheffield is to be congratulated on the selection of Dr. Beattie who, while an accomplished pathologist, is also a most pleasant and affable colleague.

Glasgow Ear, Throat, and Nose Hospital.

The annual meeting of the subscribers to this hospital was held recently. Dr. Thomas Barr submitted the medical report which stated that an average of 46 patients were seen by the medical staff every day on which the hospital was open during the past year. An average of ten new patients was dealt with daily, or a total of 2806. In the treatment of these patients 533 operations were performed under a general anæsthetic. It is noteworthy that 1000 out of the 2806 new cases coming for treatment were children under 15 years of age. In connexion with the university course of lectures 58 students received practical instruction. The financial report showed an income of £785 and an expenditure of £1003, leaving a debit balance of £218.

The Glasgow Dental Hospital.

The annual report of this hospital shows that during last year the number of cases treated was 7728. As the hospital is only open for two hours on five nights of the week this gives an average of 28 cases each night. Of the total operations, the largest proportion were of a conservative character, there being 2665 extractions and 4206 conservative operations. The gratifying feature of the year's work was the increase in the number of students at the Dental School. On Dec. 31st, 1906, there were 35 students on the roll, as compared with 27 at the close of 1905. In connexion with the finances of the hospital it seems surprising that only £70 were subscribed last year by the general public for the upkeep of the hospital, while of that sum only £2 were contributed by the working classes who benefit most largely by the institution. At the general meeting it was determined to appeal to the public more widely for funds on the ground that if the University were to be approached to grant a degree in dentistry they would require a more modern and fully equipped institution.

Sanitary Condition of Lower Renfrewshire.

In a report just issued for Lower Renfrewshire stress is laid upon the fact that during the last year there was an abnormal increase in the cases of infectious disease, the number of cases visited being 861 more than in the preceding year. While this remarkable increase was principally due to epidemic outbreaks of measles in almost every village in the district, there was also a decided increase in all the diseases with the exception of enteric fever, which has been gradually decreasing year by year until it has now almost reached the vanishing point.

Dunoon Convalescent Homes.

The new wing of the West of Scotland Convalescent Seaside Homes at Dunoon was opened on Saturday last by His Grace the Duke of Argyll. Designed in harmony with the rest of the buildings the block consists of a large number of bedrooms, directors' and medical officers' rooms, and apartments for the superintendent and the matron. Accommodation is now provided for 308 beds, the institution being one of the largest of its kind in the country. No fewer than 110,357 persons have received the benefits of the homes since they were instituted in 1869. The ordinary expenditure of the

homes for the last three years has been £6500 and this will be materially increased by the extended accommodation now available. It is gratifying to observe that last year £3766 were subscribed by those connected with works, warehouses, &c.

St. Andrew's Ambulance Association (Aberdeen Centre).

At a meeting of the committee of this association it was reported that during the past year 13 classes had been held and that the number of pupils who had passed the examinations was 249. Colonel Douglass Duncan was reappointed chairman, Professor D. W. Finlay vice-chairman, and the Rev. Jas. Smith representative in the council of the association. The following were appointed examiners for the ensuing year:—Dr. William F. Croll, Dr. T. Fraser, Dr. Peter Howie, Dr. John Innes, Dr. Francis Kelly, Dr. W. R. Pirie, Dr. Alexander Ogston, Dr. J. Smart, and Dr. J. A. Watt, all in Aberdeen; Dr. Donald Campbell, Elgin; Dr. P. C. Garson, Huntly; and Dr. Duncan D. Mackintosh, Aboyne.

Aberdeen Public Health Matters.

At the last meeting of the public health committee of the Aberdeen town council a circular was submitted from the Home Office requesting the medical officer of health to supply certain information with reference to industrial employment. The medical officer reported that the death-rate for May was 13·15 per 1000, while the average death-rate for the same month for the last ten years was 17·4 per 1000. A subcommittee was appointed to make the necessary arrangements for the forthcoming congress of the Sanitary Association of Scotland to be held in Aberdeen in September next. This subcommittee met subsequently and arranged the programme for the congress. On Sept. 4th business will begin in the town hall, to be followed by a lecture delivered by some eminent member of the association. Lord Provost Sir Alex. Lyon will formally welcome the delegates on the morning of Sept. 5th and later the President will deliver his address. The visitors will then be entertained to a garden party or a drive by the corporation. The official dinner of the association will be held on the same evening. On Sept. 6th the delegates will, on the invitation of the town council, visit some of the public institutions in the city and in the evening the corporation will hold a reception. On Sept. 7th the visitors will in all probability visit Deeside or Donside.

June 18th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Sanitary Institute.

THE work of the Conference on Sanitation and Public Health, to be held in Trinity College, Dublin, from June 25th to 29th, will be divided into three sections—viz.: (1) Sanitary Science and Preventive Medicine; (2) Engineering and Architecture; and (3) Physics, Chemistry, Biology, and Meteorology. A reception-room will be opened at the Institution of Civil Engineers of Ireland, 35, Dawson-street, Dublin, on June 25th, at noon, and on the following days at 9 A.M., for the issue of all tickets in connexion with the Conference. The inaugural address of the President will be given in the Examination Hall, Trinity College, and the sectional meetings and conferences will be held in Trinity College. To those not connected with the Institute the price of the Conference tickets is 10*s.* 6*d.* each. These tickets may be obtained at the offices of the Institute, 72, Margaret-street, London, W., or at the local offices, 63, Dawson-street, Dublin.

Health of Belfast.

At a meeting of the public health committee of Belfast held on June 15th it was reported that for the week ended June 8th there had been 13 cases of cerebro-spinal meningitis, as against 22 in the previous week. Of the 118 patients at present in Purdysburn Hospital 36 are suffering from cerebro-spinal meningitis and eight deaths occurred during the week from that disease. It is satisfactory to know that cerebro-spinal meningitis is at last showing signs of abating in Belfast. The general feeling in medical circles is that the epidemic has gradually worn itself out, but it is doubtful whether the elaborate disinfection or the isolation of the patients has been a factor in the problem; it is just as probable that the warm weather may have something to do with the gradual dying of the meningococcus or of its becoming less virulent, but so far there is no experimental evidence from the laboratory confirming this. It is curious that in Belfast for the week ended June 8th, while there is a diminution in the cases of cerebro-spinal meningitis notified (13 as compared with 22 in the previous week), on the other hand, typhoid fever has increased from three to 11 cases.

Tuberculosis in Belfast.

The medical superintendent officer of health has in a report to the public health committee recommended it to take into consideration the advisability of inviting all the medical practitioners in Belfast to coöperate in the voluntary notification of tuberculosis and that they should be paid the ordinary fee which is paid for other infectious diseases. He has also recommended the appointment of two health visitors. At a special meeting of the city corporation held on June 17th a report from the public health committee was submitted that in consideration of the authorities of the Forster Green Hospital for Consumption reserving 25 beds for patients, nominated by the committee and approved as suitable by the medical superintendent of the hospital, the corporation should be recommended to pay the sum of 35*s.* per bed per week, the corporation to be represented on the board of governors by the Lord Mayor for the time being and the chairman of the public health committee for the time being, or, in case of their inability to act, by any two members of that committee nominated by the committee. The governors of the hospital undertaking that in the event of there being any vacant beds in the hospital over and above the number referred to, patients nominated by the public health committee will be admitted on payment of 20*s.* each per week, the agreement to hold good for a period of ten years. In other words, the city council will contribute to the consumption hospital £2270 a year for the ten years for the privilege of having 25 beds at its disposal. The 25 beds are to be additional to the present accommodation at the hospital. The hospital authorities will create further accommodation for the patients to the extent of their undertaking with the corporation. The plans for the extensions are ready and the work will be proceeded with whenever the agreement is completed. A motion to approve of the above arrangement having been proposed and seconded, an amendment was submitted to refer it to the public health committee and that the latter be instructed to take into consideration the immediate establishment of a municipal consumption hospital at a maximum cost of £12,500 for lands, building, and equipment. The amendment on being put to the vote was lost by 26 to 5. A subsequent amendment that no arrangement such as was given in the suggested plan should be entered into for a longer period than 12 months was defeated by 20 to 6 votes. The original motion was then put to the meeting and was carried.

Epidemic of Typhus Fever in Newry.

It has been decided to open the Canal-street Baths in Newry as an isolation hospital for typhus fever, and already five cases have been located in them—all children. On June 17th two fresh cases from a part of the town where nearly all the cases occurred were admitted to the workhouse fever hospital.

June 18th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The French Income-tax and the Medical Profession.

THE Bill to impose an income-tax has excited the opposition of all the medical men of France. The point at issue is the stipulation made in one of the articles of the project. This states that the tax shall be estimated according to the net profits realised during the preceding year. As, however, no allowance is made for the expenses incurred in the exercise of the medical profession, though such allowance is made in regard to trade and industry, it follows that all fees will be considered as net income. The cost of instruments, of books, and of surgical dressings will not be deducted from the general income or profits. The tax will be levied on all; even the small fee granted by the authorities to the medical attendants of the poor for rendering gratuitous medical assistance to the indigent or to children assisted

by the State or the commune, and the allowance made to hospital staffs, or the reduced payments received from benefit and friendly societies, &c. For going some distance in the country the sum paid will be taxed without any deduction being made for the cost of a conveyance. The payment for a licence to practise will not be suppressed. The tax collector will have the right to verify the accounts and to ask questions as to the persons who paid the fees; professional secrecy will be violated. The tax collector will always be able to assert that it was only to deceive him that the country practitioner professed to receive less for performing the same operation than the high fee paid to a celebrated surgeon who came expressly from a large town. The practitioner will no longer be at liberty to accept smaller fees from needy persons. Finally, it may happen that some of the fees are not paid but the tax-collector may refuse to believe it. The members of the profession are naturally alarmed by all these threats and from all sides protest loudly. The most important of these protests has been made at the Union of the Medical Practitioners of the Department of the Seine by Dr. Renon who read to this union a report which contained much evidence and information and which also recapitulated the complaints that had already been made. He insisted especially on the protestation adopted by the recent congress of practitioners which was composed of 1400 medical men and more than 100 medical societies, and some of these latter have more than 1000 members. This congress adopted a motion urging all its members to vote against the project. Dr. Renon, therefore, terminated his report by proposing that the administrative council of the Union of the Medical Practitioners of the Department of the Seine should adopt the following motion:—

That widespread efforts should be made to enlighten public opinion on the dangers to which patients are exposed by the present project. That during the discussion of this project the members of the Parliamentary medical group should struggle energetically against the Bill, endeavour to obtain the maintenance of the actual state of affairs, but with some ameliorations in regard to the licence to practise; and, in the event of the Bill being carried must insist that the cost of the working expenses shall be deducted from the receipts made by medical practitioners, and the remaining net income only rendered susceptible to income-tax.

Juvenile Tabes with Ocular Complications.

At a meeting of the Ophthalmological Society held on June 4th M. Cantonnet showed a boy, aged 15 years, who was suffering from scoliosis and hereditary syphilis. When 13 years of age he began to have incontinence of urine. Eight months ago he developed oculo-motor paralysis of the left eye, which condition was much benefited by mercurial treatment. Lightning pains appeared five months ago. He now has diplopia, ataxia of the ocular muscles, inequality of the pupils with the Argyll-Robertson sign, and diminished sensation in the left side of the face. The patellar and tendo Achillis reflexes are absent. He shows neither Romberg's sign nor any locomotor ataxy.

Sulphur Waters and Mercurial Treatment.

M. Desmoulières and M. Chatin communicated to the Academy of Medicine at a meeting held on June 3rd the result of some investigations undertaken by them to determine the reason why at sulphur water health stations syphilitic patients could take mercury in doses which were four or five times larger than they could take in usual circumstances. Their investigations showed that sulphur waters act, not by the formation of an insoluble sulphate of mercury, but by augmenting the solvent power of the blood serum for albuminates of mercury. Sulphur waters, therefore, make it possible to give large doses of mercury without danger of mercurial poisoning. Moreover, if there be any accumulation of mercury in the tissues the use of sulphur waters throws it into the circulation, and they are thus of great service in cases of chronic mercurial poisoning.

The Rearing of Premature Children at the Charity Maternity Hospital.

The conditions to fulfil for the successful rearing of premature children—i.e., children born before term, between the sixth and ninth months, whose weight varies from 1500 grammes and less up to 2500 grammes—comprise three essential indications. First, to guard the infants against chill by means of incubation, massage, and hot baths. Secondly, to give them appropriate diet which should before all things consist of breast milk. Thirdly, to protect them from the results of infection to which their low powers of resistance expose them and at the same time to pay careful attention to their hygiene and to isolate them from every source of infection. Moreover, an important point is that when these children are born in a maternity charity they should be kept there during the whole time necessary for their complete development. It was by the application of these principles, and by following the rules so accurately laid down by Budin, that all the premature children born at the Charity Maternity Hospital between 1898 and 1907 were cared for. The results are as follows. Out of 735 children 616 left the hospital alive and well which gives a percentage of 83·80 survivals. The *consultations des nourrissons* at the hospital allowed 146 of these cases to be followed up over a range of time varying from one month to two years and advice and help to be given to the mothers in the task of bringing up the children. Of these 146 feeble children five died, a mortality of 3·42 per cent., so that the total survivals were 96·58 per cent. This proves that premature children can be brought up and can develop physically and intellectually in as great a proportion as full-term children. This result, which Budin's researches had already shown would occur, proves that, far from considering such children as a negligible quantity, we should strive to promote their development in every possible way. It is also desirable that in accordance with the opinion of M. Paul Strauss feeble children should be considered as "sick," and, like them, given the benefit of the law with regard to gratuitous relief, so that the indigent mother of a premature child can be helped and enabled to devote herself entirely to the difficult task of rearing the infant.

June 18th.

THE INTERNATIONAL COMMISSION ON SLEEPING SICKNESS.

AT the invitation of the Colonial Office an international conference was opened at the Foreign Office on June 17th, where representatives of the various African colonies and protectorates met to discuss the question of taking concerted action in dealing with sleeping sickness. The delegates taking part in the conference are:—

Great Britain.—Lord Fitzmaurice, Sir W. Foster, Mr. A. W. Clarke (Foreign Office), Mr. H. J. Read (Colonial Office), and Sir Patrick Manson.

Congo Free State.—Colonel Lantonnais (Vice-Governor-General), Commandant Tonneau, M. Rutten, and Dr. van Campenhout.

France.—Dr. Kermorgant, Dr. Paul Gouzion, Professor Blanchard, and Dr. Laveran.

Germany.—Herr von Jacobs (Imperial Colonial Office), Dr. Ehrlich, and Dr. Fulleborn.

Portugal.—Dr. Correa Pinto.

Sudan.—Colonel Hunter and Dr. Andrew Balfour (Gordon College, Khartum).

Lord FITZMAURICE is the president and delivered an address of welcome.

Obituary.

BENJAMIN LANE, L.R.C.P. LOND., L.R.C.S. IREL.,

BRIGADE SURGEON, ARMY (RETIRED).

Brigade-Surgeon Benjamin Lane, who for some years has lived in retirement at Cheltenham, died on June 12th at his residence in that town. He was the eldest son of Dr. W. Lane of Limavady, county Derry, and was born on June 4th, 1827. He entered the army in 1852 as assistant-surgeon and retired in 1882. He received for his services in the Burmese war of 1852–53 with the 80th Regiment the medal with clasp. He was present at the attack at Tomboo and gained distinction in the various operations in its vicinity. On one occasion, when the whole detachment at Tomboo was prostrate with fever, he devoted himself so whole-heartedly to the care of

the sick that his assiduous attention to those under his care was singled out for particular commendation in General Orders by the commander-in-chief. In the storm and stress of the Indian Mutiny his sterling worth and inherent capacity to deal with the most untoward emergencies gained for him the well-earned reputation of an able and energetic officer. On March 5th, 1858, his zeal and experience were utilised at the action on the banks of the Jumna, for which he received the medal. For 14 years his duties kept him in close touch with the 4th King's Own Royal Regiment at home and abroad. He leaves three daughters and one son who is well known in the medical profession, Mr. W. Arbuthnot Lane.

Brigade-Surgeon Lane was buried in Cheltenham cemetery on June 15th and the ceremony was attended by the immediate relatives and by a great gathering of his old military and other friends, amongst these being General Winson, General Prendergast, Colonel Croker King, Commander Dillon, R.N., Lieutenant-Colonel Harvest, Colonel Farwell, Colonel Abbott, Colonel Burlton-Bennett, and Colonel Mortimer.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The ordinary Council of the above College on the 13th inst. conferred Diplomas of Fellow upon 26 candidates who passed in the subjects of Surgery, Surgical Anatomy, and Pathology at the recent examination, for which 63 candidates presented themselves. The following are the names and qualifications of the new Fellows of the College:—

Reginald George Turner, L.R.C.P., M.R.C.S., St. George's and London Hospitals; Stanley Edward Denyer, C.M.G., M.D., M.A., B.C. Cantab., L.R.C.P., M.R.C.S., D.P.H., Cambridge University and Guy's Hospital; Richard Horace Paramore, M.D. Lond., L.R.C.P., M.R.C.S., St. Bartholomew's Hospital; James Vere Arkle, L.R.C.P., M.R.C.S., New Zealand University and St. Thomas's Hospital; Frank Arthur Hepworth, M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., Cambridge University and St. Bartholomew's Hospital; William Lawrence Cripps, B.C. Cantab., L.R.C.P., M.R.C.S., Cambridge University and St. Bartholomew's Hospital; Francis Willoughby Goyder, M.B., B.C. Cantab., L.R.C.P., M.R.C.S., Cambridge University and St. Mary's Hospital; Frank Alexander Gallon Jeans, M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., Cambridge University and St. Bartholomew's Hospital; William Girling Ball, L.R.C.P., M.R.C.S., St. Bartholomew's Hospital; Herbert Wilberforce Perkins, L.R.C.P., M.R.C.S., L.D.S., Middlesex Hospital; Albert James Walton, B.Sc. Lond., L.R.C.P., M.R.C.S., London Hospital; Ivor Gordon Back, M.B., B.C. Cantab., L.R.C.P., M.R.C.S., Cambridge University and St. George's Hospital; John Clarke Mead, L.R.C.P., M.R.C.S., St. Bartholomew's Hospital; William Isaac Cumberlidge, B.A. Cantab., L.R.C.P., M.R.C.S., St. Bartholomew's Hospital; Ebenezer Ross Faulkner, B.A., M.D., C.M. Dalhousie, L.R.C.P., M.R.C.S., St. Thomas's Hospital; Paul Leon Giuseppi, M.B., B.S. Lond., L.R.C.P., M.R.C.S., St. Bartholomew's Hospital; Melville Birks, M.B., B.S. Adelaide, L.R.C.P., M.R.C.S., Adelaide University and London Hospital; Robert Dow Forbes, M.D., McGill University, L.R.C.P., M.R.C.S., McGill University and St. Thomas's Hospital; Francis Edmund McKenty, M.D., C.M. McGill University, L.R.C.P., M.R.C.S., McGill University; David Thomas Barry, M.D. Royal University of Ireland, D.P.H., Liverpool University and London Hospital; Raymond Broadley Etherington-Smith, M.A., M.B., B.C. Cantab., Cambridge University and St. Bartholomew's Hospital; Arthur Charles Goodwin, M.B., M.Ch. Oxon., Oxford University and London Hospital; Richard Eugene Harcourt, M.D., M.Ch. Royal University of Ireland, Belfast and Liverpool University; John Swift Joly, M.B., B.Ch., B.A.O., M.D. Dublin, Dublin University and London Hospital; Francis Scobie Mackenzie, M.B., Ch.B., Ch.M. Edinburgh, Edinburgh University, King's College, and London Hospitals; and Henry Herbert Rayner, M.B., Ch.B. Victoria, London Hospital and Manchester University.

Licences to practise Dental Surgery were also conferred by the Council on the undermentioned gentlemen who have completed the necessary examinations:—

Leonard Charles Attkins, Middlesex and National Dental Hospitals; Alfred Newman Balkwill, Charing Cross and Royal Dental Hospitals; Edgar Playle Barnett, Guy's Hospital; William Gordon Batt, Middlesex and National Dental Hospitals; Edwin Leonard Brown, Guy's Hospital; Reginald William Clayton Cooper, Arthur Basil Cross, and William Allison Cuttriss, Charing Cross and Royal Dental Hospitals; Harold John Dear, Guy's Hospital; Frederic Leonard Denty, Charing Cross and Royal Dental Hospitals; Rupert Woodward Elvy, D.D.S Penn., St. Mary's Hospital; Alverstone Harold Gabell and Reginald Algernon Glindon, Guy's Hospital; William Henry Ireland and Cecil Augustus Joll, B.Sc. Lond., University College, Bristol; Jamshedji Jivanji Modi, L.M. & S. Bombay, Bombay University and Royal Dental Hospital; Lionel Alexander Burke Moore, Guy's Hospital; William Charles Augustus Ovey, Charing Cross and Royal Dental Hospitals; Ralph Redpath, Guy's Hospital; John Alfred Rose, Middlesex and National Dental Hospitals; Bertram Barnett Samuel, Guy's Hospital; Wilfrid Tom Sansom, Birmingham University; Thomas Lionel Smith, Guy's Hospital; Percy Sidney Charles Sutcliffe, Westminster and Royal Dental Hospitals; Hedley Clarence Vinick, Guy's Hospital; and William Hubert Willsher, Middlesex and Royal Dental Hospitals.

UNIVERSITY OF CAMBRIDGE.—The late Professor Newton has bequeathed to the University his zoological collections, copyrights, and books, together with £1000 for the upkeep of the zoological library.—The general board proposes that two new lectureships, one in the physiology of the senses and the other in experimental psychology, shall be established in place of the lectureship in psychophysics now held by Dr. W. H. R. Rivers, of St. John's.—The honorary degree of Doctor of Science is to be conferred on a number of distinguished foreign geologists in connexion with the approaching centenary of the Geological Society.—The Raymond Horton-Smith prize for the best M.D. thesis of the year has been awarded to Dr. J. Mellanby, M.A., Emmanuel College. The subject was "The Properties of Diphtheria Antitoxin and its Relation to the Proteids of Normal Serum."—At Congregations on June 13th and 15th the following degrees were conferred:—

M.D.—T. G. M. Hine, King's; G. T. Western, Pembroke; J. Mellanby, Emmanuel; and R. B. Leech, Christ's.
M.B. and B.C.—F. Gayner, King's; H. P. Crampton and H. W. Wiltshire, Clare; and C. Cassidy, H. P. Gibb, and H. Dimock, Sidney Sussex.
M.R.—C. R. Droop, Trinity; H. C. Cameron, St. John's; J. W. Linnell, St. John's; A. R. Jordan, Clare; and R. Lloyd.
B.C.—L. H. L. Mackenzie, Trinity.
D.Sc.—A. Scott.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Bockenheimer, Assistant in the Ziegelstrasse Surgical Clinic, Dr. Adolf Lazarus, *privat-docent* of Medicine, and Dr. Boas, *Sanitätsrat*, have been granted the title of Professor.—*Bonn:* Dr. Garré of Breslau, where he has only been for a single year, having succeeded the late Professor von Mikulicz-Radecki, has been appointed Professor of Surgery in succession to Dr. von Bergmann who goes to Berlin.—*Constantinople:* Dr. Wieting has been appointed Director of the Medical School in place of Dr. Deycke who has returned to Hamburg.—*Copenhagen:* Dr. Chr. Heyerdahl has been recognised as *privat-docent* of Neurology.—*Göttingen:* Dr. Knapp has been recognised as *privat-docent* of Psychiatry and Neurology.—*Greifswald:* Dr. Eduard Allard has been recognised as *privat-docent* of Medicine. Dr. August Martin, Professor of Gynæcology, is retiring at the close of the summer semester; Dr. M. Kochmann has been recognised as *privat-docent* of Pharmacology and Dr. Mangold of Jena as *privat-docent* of Physiology.—*Kazan:* Dr. Zimnitski of St. Petersburg has been appointed Extraordinary Professor of Medicine.—*Naples:* Dr. Alfonso Montefusco has been recognised as *privat-docent* of Infectious Diseases.—*Odessa:* Dr. Mikhael Diterikhs has been recognised as *privat-docent* of Orthopædic Surgery.—*Strasburg:* Dr. Georg Weill, *privat-docent* of Ophthalmology, has been granted the title of Professor.—*Vienna:* Dr. Schüller has been recognised as *privat-docent* of Mental and Nervous Diseases and Dr. Ludwig Wick as *privat-docent* of Balneology and Hæmatology.

THE COMPULSORY NOTIFICATION OF PULMONARY TUBERCULOSIS.—The question as to the desirability of the compulsory notification of pulmonary tuberculosis was answered in the affirmative at a conference of representatives from 28 of the 29 metropolitan borough councils held on June 6th in the Town Hall, Paddington, the Mayor of Paddington being in the chair. Mr. W. J. Nolan (Paddington), in moving that it is desirable that the notification of pulmonary tuberculosis should be compulsory, said that tuberculosis was infective and curable. He contended that compulsory notification was essential for providing the groundwork of future legislation and could be "gently worked" without interfering with the liberty of the subject. The conference before voting in favour of this motion rejected by 36 to 12 an amendment stating that it is desirable that voluntary notification of pulmonary tuberculosis should be general throughout Great Britain and Ireland. This amendment was moved by Dr. F. H. Alderson (Kensington) who declared that it was impossible to consider tuberculosis from the same standpoint as small-pox. The effect of compulsory legislation would be to make the unfortunate consumptive patient a "social leper" and sufficient sanatoriums could not be provided "without ruination to the ratepayers." Dr. A. J. Rice Oxley (Kensington) observed that the general public would not tolerate such a vexatious measure as compulsory notification which would be

more difficult to enforce than vaccination. On the proposal of Dr. T. Orme Dudfield the conference agreed to the following:—

That a sanatorium is needed for the open-air treatment of poor persons suffering from pulmonary consumption in the early stages of the disease, and should be provided by a central authority acting for the metropolis as a whole. That the managers of the Metropolitan Asylums Board, by reason of their practical experience in the management of hospitals for infectious disease, being eminently qualified for the position of such authority, the Local Government Board be requested to confer on, or if necessary to obtain for, the said managers power to act in that capacity. That the managers of the Metropolitan Asylums Board should also be empowered to use for sanatorium purposes the "Southern Hospital," recently erected by them at Carshalton, in the County of Surrey.

The following motions were also carried and a deputation was appointed to wait upon the President of the Local Government Board:—

That application be made to the Local Government Board for an order to be made to include pulmonary tuberculosis among the diseases to be notified under Section 55 of the Public Health (London) Act, 1891, and to extend the provisions of Sections 60 to 65 of the above Act to pulmonary tuberculosis.

That, in the opinion of this conference, it is desirable, in order to limit the spread of pulmonary tuberculosis, provision should be made for public inspection and control at its several sources, of the milk-supply of England, and that the Local Government Board be asked to make the Dairies, Cowsheds, and Milk Shops Order, 1885, and their amendments compulsory on local authorities.

That application be made to the Local Government Board for an order to be made to extend the provisions of Section 69 of the Public Health (London) Act to pulmonary tuberculosis, in so far as it relates to the milking of cows and to the sale and distribution of milk.

DEATH OF A CENTENARIAN.—Mrs. Patience Harris died at King's Stanley, Gloucestershire, on June 3rd, aged 101 years.

UNIVERSITY OF OXFORD.—In a Convocation held on June 18th the honorary degree of D.Sc. was conferred upon Geheimrath Professor Dr. Paul Ehrlich, director of the Royal Institute for Experimental Therapeutics, Frankfurt on the Main. Dr. Ehrlich was presented by Professor A. E. H. Love, D.Sc., Sedleian Professor of Natural Philosophy.

MEDICAL MAGISTRATES.—Mr. Richard Harding, L.R.C.P. Edin., L.F.P.S. Glasg., of New Radnor, has been placed on the commission of the peace for the county of Radnor.—Mr. John Lloyd Davies, L.R.C.P. Lond., M.R.C.S. Eng., of Newport, and Mr. Evan Thomas, M.D. Lond., L.R.C.P. Lond., M.R.C.S. Eng., of Newbridge have been placed on the commission of the peace for the county of Monmouth.

As we have already announced, a meeting to inaugurate an educational health and food campaign will be held at the Mansion House on June 26th, at 4 P.M., under the chairmanship of the Lord Mayor, and under the auspices of the Bread and Food Reform League and other societies. It is desired to institute a vigorous propaganda against the national ignorance about the value of articles of diet, the careless consumption of adulterated food, and the neglect of elementary laws of hygiene.

A SCIENTIFIC EXHIBITION.—An exhibition of engineering models, optical, electrical, and scientific instruments, technical education appliances, and tools is to be held at the Royal Horticultural Hall, Vincent-square, Westminster, London, S.W., from Oct. 22nd to 26th inclusive. In addition to exhibits by the leading makers of the above-named goods there will be an important loan collection of interesting experimental and exhibition models and apparatus and also lectures and demonstrations in various branches of applied science. The exhibition is being organised by Messrs. Percival Marshall and Co., 26-29, Poppin's-court, Fleet-street, London, E.C., who will be pleased to give further particulars on application.

DONATIONS AND BEQUESTS.—By the will of Mrs. Helen Grundy the Bury Dispensary Hospital will benefit by the sum of £3000 and the Robinson Kay Hospital for Incurables by £1500.—Miss Mary Ann Mellor Davidson has by will left £1000 to St. Mary's Hospital, Quay-street, Manchester; £1000 to the Manchester Royal Infirmary and Dispensary; £1000 to the Stockport Infirmary; £500 to the Manchester Royal Eye Infirmary; £500 to the Manchester and Salford Blind Aid Society; £500 to the Manchester and Salford Hospital for Skin Diseases; £500 to the Manchester and Northern Hospital for Women and Children; £500 to the Manchester Hospital for Consumption and Diseases of the Throat and Chest; £500 to St. Mary's Home, Manchester; and £500 to the General Hospital and Dispensary for Sick Children, Pendlebury.—By the will of Mrs. Byrne the sum of £600 is bequeathed to the Royal Sick Children's Hospital, Aberdeen, to found a cot to be called the "Elsie Mary Byrne cot," while to Morningfield Hospital, Aberdeen, the same lady has left the sum of £200.

PROLONGATION OF LIFE IN ICELAND.—Mr. J. Vidalin, British consul at Reykjavik, in his annual report to the Foreign Office, mentions that the population of Iceland in 1905 was 80,500, and adds: "A very interesting fact is the prolongation of human life. The medium age in the country in the period 1830-49 was 33 years; in 1851-60 it was 35·4 years; in 1891-1900 it was 55·9; and in 1901 it was 61·8. The chief reasons for this prolongation of life are the increase in the number of physicians and the strong measures against the introduction of infectious diseases into the country."

INSTITUTE OF HYGIENE.—A meeting of this institution was held at 34, Devonshire-street, Harley-street, W., on June 18th, when Sir Dyce Duckworth delivered a lecture on Nursing and the Needs of the Invalid. In the course of his remarks he said that we had only to cross the Channel to find how sadly inferior and belated are the nursing arrangements in most of the continental countries where, with occasional exceptions, the needs of the patient are very imperfectly met and both the *matériel* and *personnel* are clumsy, often insanitary and inadequate, though the administration may be in devoted, if untrained, hands. He said that we required more nurses fully trained in large hospitals. The primary duty of the nurse was the general welfare of the patient in every detail but she should be properly housed, comfortably fed and provided for, and not be treated as a menial. He then proceeded to give at length the various duties of a nurse.

THE LONG GROVE ASYLUM.—The new Long Grove Asylum at Epsom, erected by the London County Council, has been recently completed and the first batch of patients were received this week. The asylum is the tenth for the County of London and was designed by Mr. George T. Hine. The buildings will accommodate 2020 patients, of whom 650 will be lodged in villas. The wards are divided into the following classes: sick and infirm, acute, refractory epileptics, and chronic quiet and working patients. Two villas, taking 50 patients each, are hospitals designed for the reception of new cases and their treatment if curable, whilst two, each taking 25 patients, form probationary convalescent homes for cases so treated. The main block wards are in continuous buildings on the pavilion principle and are all intercommunicating as well as being connected with main corridors. The administrative buildings and offices are suitable, whilst full provision has been made for the accommodation and recreation of the staff. The recreation hall for patients is 120 feet by 60 feet. The asylum includes a farm with buildings, a detached chapel, a residence for the medical superintendent, an isolation hospital, and complete workshops and laundry buildings. The electricity for lighting and power purposes is generated at the central station of the Horton estate. The water tower is 130 feet high and contains tanks holding 80,000 gallons. The entire cost, excepting land and equipment, is estimated at £490,000—i.e., £243 per bed.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Wounded and Sick in War.

THE terms of the International Convention for the Amelioration of the Condition of the Wounded and Sick in Armies in the Field, which was signed at Geneva on July 6th, 1906, are set forth in an official paper presented to both Houses of Parliament. The British ratification of the Convention was deposited at Berne on April 16th, 1907. The Convention has already been ratified by Siam, the United States of America, Russia, Italy, Switzerland, the Congo Free State, and Germany. The formal adhesion to the Convention has still to be given by many other States which took part in the conference at Geneva last year.

Breathing Appliances in Mining Disasters.

The first report of the Royal Commission which was appointed to inquire into certain questions relating to the health and safety of

miners is entirely devoted to the subject of breathing appliances for use in mines at times of explosions and emergency. This matter was brought strikingly before public attention at the time of the Courrières disaster, when a rescue corps from Westphalia proceeded to the French mine with appliances for succour and relief. The Commission has utilised the experience gained in the use of various types of breathing apparatus in mines on the continent. In connexion with the investigations of the Commission the director of the Lister Institute kindly allowed experiments to be conducted at the institute. Dr. A. E. BOYCOTT, who, as the report states, was specially qualified for making an examination of the various breathing appliances by a practical knowledge of the physiology of respiration and considerable experience of underground conditions, conducted a series of experiments in great detail and his elaborate description of his work is printed as an appendix to the Blue-book. The Commissioners, after considering the evidence put before them, come to the conclusion that the question of the provision of breathing appliances demands the serious attention of the mining industry. However, they are of opinion that sufficient advance has not been made to justify making the provision of the appliances compulsory. A good deal of experience is required as to their working and as to the best system of training men before the value of their use can be properly appreciated. At the same time they express confidence that the necessary steps towards a systematic use of the appliances will be taken by the mine-owners of the United Kingdom without delay.

The College of Science.

Dr. DONALD MACALISTER, President of the General Medical Council, who recently became Principal of the University of Glasgow, has been appointed by the Crown to the governing body of the new College of Science at South Kensington. His name was included in the list announced by the Prime Minister in the House of Commons on Monday.

Purity of Milk-supplies (Scotland) Bill.

The text of the Purity of Milk-supplies (Scotland) Bill, introduced into the House of Commons recently by Mr. WATT, has been printed. The measure is supported by Sir ANDREW TORRANCE, Mr. PRICE, Mr. MCCALLUM, and Mr. HALLEY STEWART. The object of the Bill is to insure the purity of milk-supplies in rural and urban districts of Scotland. One of the clauses lays down that no person shall sell for human food the milk of any cow suffering from chronic wasting disease or any disease of the udder or ulceration of the teats. There are further provisions in the Bill for the notification of disease in cows and for the prevention of infection or contamination of the milk.

The Investigation of Cancer.

Last week Captain FABER put a question on the notice paper of the House of Commons in which he asked the Prime Minister whether he could see "his way to appoint a Royal Commission to inquire into the prevailing scourge of cancer." The Prime Minister, through his private secretary, intimated to Captain FABER that he would take some days to consider his answer, and up to Wednesday night the honourable Member had received no further communication on the subject. The delay of the Prime Minister in sending a reply to the question has raised hopes amongst many members that the Government will assent to some such investigation as Captain FABER suggests, but no formal and official announcement has been made.

HOUSE OF COMMONS.

THURSDAY, JUNE 13TH.

Women Medical Referees.

Mr. HENRY J. WILSON asked the Secretary of State for the Home Department whether he had taken, or would take, into consideration the propriety of appointing some women medical referees under the Workmen's Compensation Act which will come into force on July 1st, especially in cases or districts where women were largely employed.—Mr. GLADSTONE answered: I am not aware that any necessity for such appointments has been found to exist under the Act of 1897, which applied to a large number of women employed in factories, but I shall be glad to take the matter into consideration.

Hygiene in Schools.

Mr. HARMOOD-BANNER asked the President of the Board of Education whether his attention had been called to the demand for the compulsory introduction of the teaching of hygiene and temperance into the curriculum of the elementary schools; and whether he intended by legislation or administrative action to carry through a scheme in reference thereto with as little delay as possible.—Mr. MCKENNA replied: I have received numerous representations urging the necessity of extending the teaching of hygiene in elementary schools. The code at present lays down that physical training should be included in the curriculum for scholars other than infants and should be accompanied by instruction in the elementary rules of personal health in respect of food, drink, cleanliness, and fresh air, and the volume of "Suggestions for the Consideration of Teachers," which was issued by the Board a few years ago, included an outline scheme for the teaching of hygiene and temperance. I am considering how numerous difficulties connected with the teaching of this subject can be surmounted and I hope to derive considerable assistance in this from the International Congress upon School Hygiene which will meet in London in August.

FRIDAY, JUNE 14TH.

The Medical Inspection of School Children.

During the afternoon the House considered the Education Acts Amendment Bill as amended in Standing Committee. This is the measure which was introduced by Mr. W. REA to make provision for the medical inspection and treatment of school children.

Sir F. BANBURY moved as an amendment to omit Clause 1, which contained a provision for the medical inspection of children "before or at the time of their admission" to a public elementary school. He thought the clause went too far, as under it the local education authority appeared to be empowered to give a medical man a roving commission to examine children who, he might think, required medical examination or attendance.

Captain CRAIG seconded the amendment. He contended that the clause merely amounted to securing medical attendance for children from the day they were born.

Mr. W. REA pointed out that the Bill was composed of two uncontentious clauses from the Education Bill of last year. He could assure honourable Members that the fears expressed with regard to the extent of the operation of the clause under discussion were groundless. The words providing for the medical inspection of children, "before or at the time of their admission to a public elementary school," must be read in conjunction. He was informed that the introduction of the word "before" in this connexion could not be construed into meaning that State medical inspection of children was permitted from the time they were born.

After some discussion the amendment was by leave withdrawn.

Sir P. MAGNUS moved an amendment to alter the phraseology of the clause so that it should be provided that the medical inspection should take place "at any time within 12 months after" the child's admission to school.

Captain CRAIG seconded the amendment.

Sir WILLIAM COLLINS considered that the best time for the medical inspection to take place was shortly after the admission because teachers, when they had become familiar with the children, were able to indicate to the medical officer defects from which they thought the children were suffering.

Mr. LOUGH (Parliamentary Secretary to the Board of Education) suggested that some such words as "immediately before, about the time of, or as soon as possible after" the admission of the child would meet the case.

The amendment was withdrawn and the words suggested by Mr. Lough were inserted in the Bill.

Mr. ASHLEY moved as another amendment that a provision should be inserted in the Bill laying down that expenses incurred under the Act for attending to the health and physical condition of a child should be recoverable from the parent in a court of summary jurisdiction.

Sir F. BANBURY seconded the amendment. However, after some discussion it was defeated by 229 votes to 39. This completed the report stage of the Bill.

MONDAY, JUNE 17TH.

The Food Regulation Bill.

Mr. ALDEN asked the President of the Local Government Board, in view of the non-introduction of the Food Regulation Bill, whether he could state the degree in which his Bill had the support of the leading sanitary authorities and medical officers of the country and the extent to which it was opposed by such authorities.—Mr. BURNS replied: My honourable friend is under a misapprehension. The Bill to which he refers was introduced this session. It was brought in some time since and is awaiting second reading. I have received several communications from the sanitary authorities in favour of the Bill and none against it.

The Teaching of Hygiene in Scottish Schools.

Mr. WEIR asked the Secretary for Scotland whether the Scottish Education Department would be represented at the International Congress upon School Hygiene which will meet in London in August; and whether he would consider the expediency of arranging for the compulsory teaching of hygiene and temperance in the elementary public schools in Scotland.—Mr. SINCLAIR answered: The department proposes to be represented at the Congress. It is not prepared at present to make the teaching of the subjects mentioned compulsory, but will carefully consider the reports of any discussions on the subject at the Congress.

Factory Inspection in Belfast.

Mr. CHARLES DUNCAN asked the Chief Secretary to the Lord Lieutenant of Ireland whether, seeing that the medical officer of health of the city of Belfast recently refused to take action in a case of factory inspection, and that a special sanitary inspector was sent to Belfast by the Government, any report had yet been issued by his department on this case; and, if not, whether any promise could be given as to the date of its publication.—Mr. BIRRELL sent the following written reply to the honourable Member: The inspection of factories is a matter which concerns the Home Secretary to whom any inquiry on the subject should be addressed. As regards the latter part of the question it is assumed that the honourable Member intends to refer to the Commission of Inquiry which is at present investigating the general sanitary administration of Belfast. The Commission has not yet finished taking evidence and it cannot be said when its report will be ready.

TUESDAY, JUNE 18TH.

The Lunacy Commission.

Sir JOHN TUKE asked the Secretary of State for the Home Department whether, pending the production of the report of the Royal Commission on the Care and Control of the Feeble-minded, and pending legislation founded on the said report, he would take any steps to supplement the Lunacy Commission so as to relieve the existing congestion in the department and to procure adequate inspection of asylums.—Mr. GLADSTONE said in reply: The number of the Commissioners in Lunacy is fixed by statute and while I am fully alive to the fact that the great increase in the duties which they have to carry out has caused a considerable congestion of business, to meet which an addition to their staff may be required, I could not initiate legislation pending the presentation of the report of the Royal Commission.

MEDICAL AND DENTAL COMPANIES.

The Select Committee of the House of Lords, which was appointed to take evidence in connexion with the Prohibition of Medical Practice by Companies Bill and the Dental Companies (Restriction of Practice) Bill, held its concluding public sitting on Thursday, June 13th. Lord HYLTON was again in the chair and all the other members of the committee were present.

Mr. MUIR MACKENZIE, who was lately legal assessor to the General

Medical Council, was the first witness examined. He stated that he had been concerned in the drafting of both Bills. He pointed out that no evidence against the Prohibition of Medical Practice by Companies Bill had been offered to the committee. So far as his experience went there would be many companies affected by the Bill.

Lord KNUTSFORD: With regard to the Dental Bill, has your attention been drawn to the fact that a certain number of dental companies, although composed of unqualified persons, appear to be *bond fide* and appear also to do a great deal of good in districts where there are no registered practitioners at present? The evidence is very strong that there are such companies legitimately formed and carried on, no doubt, by unqualified persons who nevertheless have had some training.

Mr. MUIR MACKENZIE: I have never come across a company of this sort carried on to the advantage of the public, and the mischief of unqualified men, however much their experience is assumed to be, is, I am convinced, a very grave one. I have seen this, not only as a lawyer in the course of a very large practice at the Bar, but also when I was connected with the General Medical Council.

Lord KNUTSFORD: From your experience would you consider that there should not have been in the Acts of 1878 and 1858 exemptions for persons who were in *bond-fide* practice? In 1858 persons who had not been on the Register were allowed to go on it, and in 1878 the same thing happened.

Mr. MUIR MACKENZIE: That was the case, but it was not to the advantage of the public, if your lordship will permit me to say so. He went on to say that ignorant and incompetent men had in this way been placed on the Register.

Lord KNUTSFORD: You think on general principles that it is not desirable that there should be companies of this sort?

Mr. MUIR MACKENZIE: I think that is a great disadvantage to the public.

Lord KNUTSFORD: You would not therefore agree with the Dental Bill?

Mr. MUIR MACKENZIE: As a member of the public I would prefer the Bill to no Bill at all, but I would prefer the extension of the principle of the Medical Bill.

Lord KNUTSFORD: You would not make any exemptions in the case of the dental companies.

Mr. MUIR MACKENZIE: I do not think it is possible to draft provisions for those exemptions. He could not agree that any company of unqualified surgeons, physicians, or dentists was carrying on a *bond-fide* practice. If the committee asked him his opinion he would say that the introduction of exemptions into the Bill would lead to the possibility of abuse.

The CHAIRMAN: I rather gather that you hold that the establishment and the working of these dental companies are contrary to the intentions of the Act of 1878. That is your principal contention.

Mr. MUIR MACKENZIE: Certainly.

The CHAIRMAN: Under the Act of 1878 the legislature intended to direct that only qualified dental practitioners should be allowed to practise, and what has been going on since has been contrary to the intentions of the legislature?

Mr. MUIR MACKENZIE: No doubt that was the intention. However, in the Act of 1858 and in the Act of 1878 the legislature stopped short of making it a misdemeanour for unqualified men to practise. However, they imposed disabilities.

Lord KNUTSFORD: The unqualified man cannot recover fees, for instance.

Mr. MUIR MACKENZIE: No.

The CHAIRMAN: Some evidence has been given to us tending to suggest that if we passed the Prohibition of Medical Practice by Companies Bill in its present form our object might be defeated by any of the present joint-stock companies being dissolved and private companies being formed which would in future do exactly what joint-stock companies do at present.

Mr. MUIR MACKENZIE: The answer is there is no such thing as a private company. The joint-stock company is an incorporated body. A company apart from that kind of company is merely the persons who compose it.

The CHAIRMAN: You see no danger in the phrase "to prohibit joint-stock companies"?

Mr. MUIR MACKENZIE: No, none at all.

Mr. LUSHINGTON, legal assessor to the General Medical Council, gave evidence on several of the legal points involved in the Bills.

The CHAIRMAN: If you have not got a joint-stock company to deal with I suppose it is a partnership?

Mr. LUSHINGTON: Then it is a question of individuals and the Dentists Act applies. He thought if the Dental Bill passed without exemptions that a man who had been practising through a company could go on in his own name as an unregistered practitioner. Their lordships had been told that companies had been formed for the purpose of obtaining additional capital, but that course was also taken for the purpose of screening the assets from attack. He did not see what more capital was required for in these cases except for advertising. He would be surprised to hear that there was any part of England where there were not enough registered dentists for the work. There were very few districts where there were no registered dentists.

Lord KNUTSFORD: We have very strong evidence to the contrary.

Mr. LUSHINGTON: The Registrar to the General Medical Council could give you evidence on that point, if you desire it, because he knows the addresses of registered men.

Mr. W. H. WINTERBOTHAM, solicitor to the General Medical Council, went into the witness-chair and submitted that in two specific cases which had been brought before the committee, the companies could be carried on as private concerns.

Mr. F. BUTTERFIELD, secretary to the Incorporated Society of Extractors and Adapters of Teeth, explained the conditions under which membership of that organisation was obtained. He stated that there were about 1750 towns and villages in Great Britain with populations ranging from 300 to 20,000 or 30,000 where there were no registered dentists established. He contended that good work was done by unregistered men in filling up the deficiency and gave instances of various towns in support of his contention.

Mr. WINTERBOTHAM was recalled.

The CHAIRMAN: Mr. Winterbotham, the committee has had before them the question of whether herbalists are affected or not by the Medical Bill. We hold that they are not but we should like to have your opinion on the point.

Mr. WINTERBOTHAM: I listened to the evidence given by Mr. Blunt, and I gather that the company for which he spoke was not a practising company but an association of herbalists formed for their own mutual benefit. He said that they individually practised. The company does not practise and therefore it would not be affected.

The CHAIRMAN: We do not touch their practice as individuals. That is left untouched.

Mr. WINTERBOTHAM: Yes.

Dr. D. MACALISTER, President of the General Medical Council, was recalled. In answer to the CHAIRMAN, he stated that the General Medical Council had no power to deal with any unqualified or unregistered person whatever.

Lord KNUTSFORD: The only association of herbalists that has been brought under the notice of the committee is one which would not come under the Medical Bill?

Dr. MACALISTER: They may come under the Apothecaries Act if they prescribe and dispense medicine. We have nothing to do with the administration of that Act. He further stated that the Bill gave no power to the General Medical Council which it did not at present possess.

This concluded the hearing of the evidence before the committee and the members then sat in private for the purpose of considering the Bills and their recommendations on them.

VACCINATION BILL.

One of the Standing Committees of the House of Commons on Wednesday, June 12th, took up the consideration of the Vaccination Bill, the object of which is to substitute a statutory declaration for the certificate of exemption on the grounds of conscientious objection required under the Act of 1898. Mr. LAURENCE HARDY was in the chair.

Several amendments, including one to extend the application of the Bill to Scotland, were ruled out of order by the Chairman as being beyond the scope of the measure.

Sir WILLIAM COLLINS moved an amendment to Clause 1 of the Bill (which is the operative clause) with a view to making it legal for the parent to make the statutory declaration of conscientious objection before the registrar of births and deaths at the time of the registration of the birth. He stated that he intended that the commissioners for oaths and magistrates should still be competent to receive the declaration, but on the ground of additional facilities he wished to add the registrars to them. The father of a child was brought into relationship with the registrar when he registered the birth within six weeks of its occurrence, and that provided, as it were, the time and place at which the declaration of conscientious objection might be made.

Dr. MACNAMARA resisted the amendment as undesirable. He remarked that the Bill was not brought forward to take up the cause of the vaccinationist or of the antivaccinationist. It was to put an end to the cross-examination of applicants for certificates which had taken place in courts.

Sir JOHN TUKE said that if the amendment were carried they might just as well repeal the whole of the Vaccination Acts which was, he believed, the object of several members of the committee.

Mr. BURNS (President of the Local Government Board) declared that the object of the Bill as conceived by the Government would to a great extent be damaged and the existence of the Bill threatened if the amendment was carried. In his judgment the stipendiary magistrates, the commissioners for oaths, and the justices of the peace were far better qualified to receive the declaration of conscientious objection than was the registrar who might be a vaccination officer. A child's birth had to be registered in six weeks but vaccination need not take place for four months. However, the amendment would place a strong temptation upon the parent to register the birth and make the declaration at one visit. In that way they would practically diminish the discrimination of the parent. If the Bill was to become law this session he would appeal to honourable Members not to press the amendment.

On a division the amendment was rejected by 16 votes to 15.

After several minor amendments had been discussed

Mr. PICKERSGILL moved an amendment to permit either of the parents or "other person" to make a statutory declaration. He argued that it was often inconvenient for the father of the child to travel to a magistrate if there was none in his vicinity and thereby expense was incurred.

Dr. MACNAMARA, speaking as the representative of the Local Government Board, said that the amendment would strike a revolutionary blow at the whole English legal practice. Now an exemption was granted to a person who was liable. Here it was proposed to grant an exemption to a person who was liable through a person who was not liable.

On a division the amendment was carried by 16 votes to 14, the Government being thus placed in a minority of two.

The committee shortly afterwards adjourned.

The consideration of the Vaccination Bill was resumed by a Standing Committee of the House of Commons on June 18th, Mr. LAURENCE HARDY being in the chair.

Sir HENRY CRAIK moved an amendment to the effect that the statutory declaration required by the Bill should be made before a justice of the peace only. He remarked that if a person had any conscientious objection to vaccination surely it would not be too much to ask that he should have the courage of his conviction and publicly declare his objection in open court.

Mr. BURNS said that the amendment would seriously interfere with the scope of the Bill and therefore he could not accept it.

The amendment was by leave withdrawn.

Mr. ASHTON moved a further amendment to the effect that the statutory declaration of conscientious objection could be legally made to the chairman of a parish council. However, this proposal was withdrawn after some discussion.

Sir WILLIAM COLLINS then moved an amendment to the effect that exemption should be granted on the ground that the parent "conscientiously objected to the vaccination of the child." The provision in the Bill is that exemption should be granted on the ground that the parent "conscientiously believes that vaccination would be prejudicial to the health of the child." The honourable Member said that his amendment would limit the declaration to one of a simple objection to vaccination. As a member of the Royal Commission on Vaccination he said that this would be quite in harmony with its recommendations. The evidence before that Commission disclosed that the objection to vaccination was not entirely based upon the fear of physical injury. Dr. Creighton, who had written the article on vaccination

in the ninth edition of the Encyclopædia Britannica, had rather based his objections on the ground that cow-pox was not a specific against small-pox. There were also objections on the ground of the impermanence of the protection of vaccination and some parents objected on the ground of the tender age of the child at which the present law of vaccination was enforced. He pointed out that in the case of the Education Acts there was no formula required of the special ground of conscientious objection. He might also add that in Germany the child need not be vaccinated till after the first year of life.

Sir JOHN TUKE said that there had been many attempts to broaden the basis of the Bill but none would broaden it more than this amendment would. He would not follow Sir William Collins into medical arguments but he would strongly press the Government not to accept the amendment. He referred to the condition of Scotland, where about 95 per cent. of that educated nation were vaccinated.

Mr. LUPTON remarked that besides the objections mentioned by Sir William Collins there ought to be taken into account the objections which many people had to vaccination on religious grounds. They did not believe in introducing diseases of any kind into the bodies of their children.

Mr. NAPIER pointed out that the amendment would open up the whole question of vaccination. The Members of the House of Commons would not be inclined at this stage of the session to enter into the consideration of such a large subject. However, he was anxious that the scandal which had arisen in the courts with regard to the granting of certificates of exemption should be put a stop to and therefore he did not want to risk the loss of the Bill by the introduction of the amendment.

Mr. BURNS said that if once they opened the flood-gates of medical difference for and against vaccination they would have to sit longer than the Royal Commission itself did. Personally he was, and had ever been, an antivaccinationist. It was because he shared the bulk of the views expressed by those who held these opinions that he would urge the committee not to jeopardise this Bill which had been brought in with cool and calculated deliberation to remove an admitted grievance. This would not be done if this medical controversy was entered upon. It would be absurd for any of them to say that this was the last word in the vaccination controversy. If he were to accept the amendment of Sir William Collins he was afraid it would be the last word on this particular Bill this session. He appealed to his honourable friend not to press the amendment which if set loose in the House of Commons would prevent the Bill getting through.

Mr. J. RAMSAY MACDONALD said that he had himself experienced a difficulty in making a declaration which limited the objection to the belief that vaccination would be prejudicial to the child. How, he might ask, could a layman know whether vaccination would prejudice the health of his child? He might also point out that there was no conscientious objection allowed in Scotland. Sir John Tuke must take that into account when he talked of 95 per cent. of the people there being vaccinated.

Sir WILLIAM COLLINS, in view of the statement made by the President of the Local Government Board, asked leave to withdraw his amendment.

The amendment was by leave withdrawn.

Mr. LUPTON moved an amendment which was designed to give power to parents to make a declaration under the Bill with regard to their children who were born before it came into operation in January, 1908.

Mr. BURNS opposed the amendment, which was rejected by 21 votes to 11.

After some further discussion the proceedings on the Bill in committee were completed and it was ordered to be reported to the House as amended.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week such information for gratuitous publication.*

COURT, E. P., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Horsmonden District of the county of Kent.

DRURY, G. H., M.B., M.S. Edin., has been appointed Medical Officer and Public Vaccinator for the Fifth District of the Wells (Somerset) Union.

FANNING, J. J., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Birr District of King's County.

FLETCHER, G. W. MORGAN, L.D.S. R.C.S. Eng., has been appointed Honorary Dental Surgeon to the Bristol Royal Hospital for Sick Women and Children.

GEDDIE, DAVID WATSON, M.A., M.B., C.M. Aberd., has been appointed Anæsthetist to the Royal Sick Children's Hospital, Aberdeen.

GOODWYN, HENRY, L.R.C.P., L.R.C.S., L.M. Edin., has been appointed Medical Officer for Bovey Tracey and Ilsington by the Newton Abbot (Devon) Board of Guardians.

LLEWELLYN, THOMAS LISTER, M.D., B.S. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer for the Powell Duffryn and Rhymney Iron Companies (Monmouthshire).

LOCKETT, REGINALD FREDERICK, L.D.S. R.C.S. Eng., has been appointed Honorary Dental Surgeon to the Clevedon, Tickenham, Walton, and Kenn Dispensary.

LYON, T. M. M., M.D. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Mid-Calder District of the county of Edinburgh.

PEDDIE, C., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Certifying Surgeon under the Factory and Workhop Act for the Withnell District of the county of Lancaster.

PORTEOUS, HERBERT LLEWELLYN, L.R.C.P. Lond., M.R.C.S., has been appointed a District Medical Officer by the Stroud (Gloucestershire) Board of Guardians.

RICHARDS, JOHN, M.B., F.R.C.S. Edin., has been appointed Medical Superintendent of the Joint Counties Asylum, Carmarthen.

RICHARDS, MORGAN, M.B., B.S. Durh., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

SPAIGHT, HENRY WILLIAM, L.R.C.P., L.R.C.S., L.M. Irel., has been appointed District Medical Officer for the Helston (Cornwall) Board of Guardians.

VISGER, CHARLES, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Clevedon, Tickenham, Walton, and Kenn Dispensary.

WILLCOX, W. H., M.D. Lond., M.R.C.P. Lond., has been appointed Physician to Out-patients at St. Mary's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

AYR DISTRICT ASYLUM.—Junior Assistant Physician, unmarried. Salary £120, with board, apartments, and laundry.

BERMONDSEY MEDICAL MISSION.—Lady Assistant for six months, with board and lodging.

BOLTON INFIRMARY AND DISPENSARY.—Junior House Surgeon. Salary £100 per annum, with apartments, board, and attendance.

BRADFORD POOR-LAW HOSPITAL AND WORKHOUSE.—Resident Assistant Medical Officer, unmarried. Salary £100, with rations, apartments, and washing.

BRADFORD ROYAL INFIRMARY.—Resident Surgical Officer. Salary £150 per annum.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—Second House Surgeon, unmarried. Salary £60 per annum, with board, residence, and washing.

BURNLEY, VICTORIA HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with residence, board, and washing.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—Assistant House Surgeon for six months. Salary £50 per annum, with board, residence, and laundry.

CANCER HOSPITAL, Fulham-road, S.W.—Medical Officer in Charge of the Electrical Department. Salary £26 5s. per annum

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer, unmarried. Salary £100 per annum, with apartments, board, attendance, fire, gas, and washing

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House Surgeon for six months, renewable. Salary £60 per annum, with rooms, board, washing, and attendance.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Assistant Surgeon. Also Second Medical Officer to the Casualty Department. Salary at rate of £40 per annum.

EDMONTON WORKHOUSE, Upper Edmonton.—Assistant Medical Officer. Salary £180 per annum.

EGYPT. Sub-Inspector of Ophthalmic Hospitals, unmarried. Salary £500 a year.

ENNISKILLEN, FERMANAGH COUNTY HOSPITAL.—House Surgeon. Salary £52 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Clinical Assistants.

GLOUCESTER, GENERAL INFIRMARY AND GLOUCESTERSHIRE EYE INSTITUTION.—Senior House Surgeon. Salary £100 per annum, with board, residence, and washing.

GREAT NORTHERN CENTRAL HOSPITAL, N.—Honorary Medical Officer in Charge of Electrical Department.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—House Surgeon. Salary £100, with board, residence and laundry. Also Assistant House Surgeon. Salary £50, with board, residence, and laundry.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon, unmarried, for six months. Salary £20, with board and residence.

HULL, ROYAL INFIRMARY.—Casualty House Surgeon. Salary £50, with board and lodging.

INDIAN MEDICAL SERVICE.—An Examination for not less than 11 Commissions.

KIRKBURTON, NEAR HUDDERSFIELD, STORTHES HALL ASYLUM.—Locum Tenens for two months. Salary £3 3s. per week, with board, lodging, and attendance.

LEEDS UNION INFIRMARY, Beckett-street.—Assistant Medical Officer, unmarried. Salary £100 per annum, with board, washing, apartments, and attendance.

LEICESTERSHIRE AND RUTLAND ASYLUM, Leicester.—Senior Assistant Medical Officer, unmarried. Salary £150, rising to £200, with board, apartments, and washing.

LINCOLN COUNTY HOSPITAL.—Junior House Surgeon, unmarried, for six months. Salary £25, with board, residence, and washing

LIVERPOOL EYE AND EAR INFIRMARY.—House Surgeon. Salary £80 per annum, with board and lodging.

LIVERPOOL WORKHOUSE, Brownlow Hill.—Assistant Medical Officer. Salary £80 per annum, with rations.

LONDON FEVER HOSPITAL, Liverpool-road, N.—Assistant Resident Medical Officer. Salary £120 per annum, with board and lodging.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House Surgeon. Salary £100 a year, with rooms, attendance, board, and washing.

MAIDSTONE, WEST KENT GENERAL HOSPITAL.—Assistant House Surgeon, unmarried. Salary £40, with board and lodging.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury.—Senior and Junior House Physicians. Salary £50 per annum, with board and residence in each case.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary £160.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Junior Resident Medical Officer. Salary £80 per annum, with board, residence, and laundry.

NORFOLK AND NORWICH HOSPITAL.—Assistant House Surgeon for six months. Salary £20, with apartments, board, and laundry.

OLDHAM WORKHOUSE.—Resident Medical Officer, unmarried. Salary £150 per annum, with residence, coal, gas, rations, washing, and attendance.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Resident Medical Officer for four months. Salary at rate of £60 per annum, with board, residence, and washing.

ROYAL INSTITUTE OF PUBLIC HEALTH.—Demonstrator of Comparative Pathology and Bacteriology.

ST. MARY'S HOSPITAL, Paddington, W.—Curator of the Museum and Assistant Pathologist. Salary £100 per annum.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road.—Honorary Surgeon for Throat, Nose, and Ear Cases.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon. Salary £80 per annum, with board and residence.

SHEFFIELD FEVER HOSPITALS.—Junior Assistant Medical Officer. Salary £130 per annum, with board, lodging, and washing.

SHEFFIELD, UNIVERSITY OF.—Demonstrator in Physiology. Salary £150 per annum.

SOUTH SHIELDS, INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Senior House Surgeon. Salary £100 per annum, with residence, board, and washing.

STOCKPORT UNION, STEPPING HILL HOSPITAL.—Resident Assistant Medical Officer. Salary £130 per annum, with apartments, rations, &c.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, apartments, &c.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—Surgeon to Out patients.

WALLASEY DISPENSARY AND VICTORIA CENTRAL HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with apartments, board and service.

WEST BROMWICH DISTRICT HOSPITAL.—Senior House Surgeon, unmarried. Salary £110 per annum, with board residence, and laundry. Also Assistant House Surgeon, unmarried. Salary £75 per annum, with board, residence, and laundry.

WEST LONDON HOSPITAL Hammersmith-road, W.—Officer in Charge of X Ray Department.

WESTERN GENERAL DISPENSARY, Marylebone-road, N.W.—Senior House Surgeon. Salary at rate of £100 per annum, with board, residence, and washing.

WORCESTER GENERAL INFIRMARY.—House Physician. Salary £80 per annum, with board, residence, and washing.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Whitchurch, in the county of Hants; at Henley-in-Arden, in the county of Warwick; at Stratton, in the county of Cornwall; and at Penarth, in the county of Glamorgan.

Births, Marriages, and Deaths.

BIRTHS.

ALCOCK.—On June 15th, at Downshire Hill, Hampstead, N.W., the wife of N. H. Alcock, M.D., of a daughter.

BRODIE.—On June 13th, at Tetbury, Glos., the wife of Desborough Brodie, M.B., B.S., of a son.

GERVIS.—On June 14th, at Hurdis House, Seaford, Sussex, the wife of Charles Berkeley Gervis, M.D., of a daughter.

WAY.—On June 12th, at Kenilworth Lodge, Southsea, the wife of Montague Way, L.R.C.P. Lond., M.R.C.S. Eng., of a son.

MARRIAGES.

GROVES—MILLER.—On June 12th, at St. Mary's Church, Speenhamland, Newbury, Charles Nixon Groves, M.A., M.D. Oxon., to Frances Minnie, younger daughter of Frederick Montague Miller, J.P., M.R.C.S., L.R.C.P.

JOY—ANGUS.—On June 15th, at Independent Church, Brixton, S.W., George Percy Joy, M.A., M.B., Ch.B., to Jane Angus, eldest daughter of Alexander Angus of Aberdeen.

MACNEILL—GRAHAM.—On June 14th, at the private chapel, Langholm, by the Rev. J. A. Seaton, Robert Archibald Macneill, M.B., Ch.B., Surbiton, Surrey, second son of John Macneill, National Bank House, Langholm, to Ida Doeg, younger daughter of Henry Graham Holmwood, Langholm.

MILWARD—TILLEY.—On June 11th, at St. Augustine's Church, Edgbaston, by the Venerable Archdeacon of Birmingham, assisted by the Rev. H. R. Hall, rector of Boothby, Lincoln, Frederic Victor Milward, B.A., M.B., B.C. Cantab., F.R.C.S. Eng., son of the late Colonel Victor Milward, formerly M.P. for the South-Western Division of Warwickshire, and of Mrs. Milward, Tiddington, Stratford-on-Avon, to Elinor Mary (Nora) Tilley, eldest daughter of Ben B. Tilley of Cromartie, Edgbaston.

DEATHS.

COATES.—On June 16th, at The Hill, Laverstock, Salisbury, Harcourt Coates, M.R.C.S. Eng., L.R.C.P. Lond., aged 54 years.

LEY.—On June 16th, at his residence, 11, Longfield-road, Ealing, W., Henry Smith Ley, Captain Royal Navy (retired), the dearly loved husband of Sarah Ann Ley, and son of the late Commander George Ley, Royal Navy, of Rochester, Kent, in the 81st year of his age.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

BRITISH BIRDS.

WE have received the first number of a publication called *British Birds*, of which the subtitle is An Illustrated Magazine devoted to the Birds on the British List. Mr. Howard Saundres contributes a paper on Additions to the List of British Birds since 1899. We are sorry to say that most of the birds therein mentioned were identified by being shot. In one instance, at least, the shooting appears to us to have been quite unnecessary—namely, p. 13. On Feb. 2nd, 1905, an adult male of this Alpine species (the snow-finch) was shot at Rye Harbour, Sussex, and shown in the flesh to Mr. M. J. Nicoll who was on the look-out for the bird, having noticed it among a large flock of skylarks the previous day. Having identified the bird why not let it alone? Mr. P. H. Bahr contributes a charming account of the osprey, illustrated by some beautiful reproductions of photographs obtained, we are sorry to say, in America, for this beautiful and interesting bird is reduced in these islands to a solitary pair or so. Mr. C. J. Whymper writes upon the position of the woodcock's ear. It is remarkable, for it is below and in front of the eye. Mr. Whymper says that he gathers that this fact is not generally, if at all, known. In this, however, he is mistaken. The magazine is interesting but we hope that it will be devoted to the preservation of rare birds and not to their "collection."

A NEGLECTED TEXT.

To the Editors of THE LANCET.

SIRS,—When next Mr. John Pratt engages in controversy on behalf of Biblical authority for "the use of alcoholic beverages as medical remedies" he will be well advised to *neglect* the text which he has adduced in his letter of June 8th, for he might search the Scriptures diligently without discovering another petard to hoist himself with so effectually. The passage referred to runs thus: "It is not for kings, O Lemuel, it is not for kings to drink wine; nor for princes strong drink: lest they drink, and forget the law, and pervert the judgment of any of the afflicted. Give strong drink unto him that is ready to perish, and wine unto those that be of heavy hearts. Let him drink, and forget his poverty, and remember his misery no more."

Clearly this means that strong drink may indeed be given to the utterly wretched in order to induce oblivion (alcohol was probably the most effectual narcotic known at the time), but that those who have responsibilities which demand alertness of mind and a just discrimination should abstain. Having ruthlessly torn the passage in half and flung the prohibition to limbo your correspondent triumphantly produces the other fragment as an unanswerable proof of the truth of his contention and apparently proposes to hurl it in the face of some recalcitrant "members of a particular friendly society." I venture to predict that he will find himself no match for his opponents in textual warfare and such "methods of barbarism." Let him take his stand boldly by common sense (and the Higher Criticism if necessary!), not forgetting that there is an increasing tendency to regard the pronouncement of Lemuel's mother as uncommonly good advice and sound medicine.

I am Sirs, yours faithfully,

June 17th, 1907. THE CONTEXT.

X RAYS AND FIBROSIS OF THE OVARY.

To the Editors of THE LANCET.

SIRS,—Can you inform me, in relation to the action of x rays in producing fibrosis of the ovaries and testicles, whether all the constituents of these organs are affected? In the case of the ovary is a premature menopause induced and is there any constitutional effect similar to that of ovariotomy—i.e., in temperament, &c.? What length or exposure is known to have caused fibrosis?

I am, Sirs, yours faithfully,

June 19th, 1907. KIRROS.

*** There is no positive evidence up to the present to show that the x rays can produce a premature menopause or sterility in the human female subject. From the fact, however, that atrophy of the ovary has been produced in small animals, such as the rabbit, and with much greater difficulty in the bitch, it would seem that the x rays have a selective action on the ovary, but that the success of the experiment is greatly dependent on the thickness of the tissues lying between the ovary and the surface exposed to the tube. Atrophy of the ovary in woman would seem to be impossible to produce by x rays from the fact that in experiments on the cadaver in which a radiometric pastille was placed over the ovary itself no change in the pastille was recorded after prolonged exposure.—ED. L.

A MEDICAL MAN AND GOOD OPENINGS.

OUR readers may remember that we have refused to assist Dr. F. F. Jay to get into communication with those of our advertisers who require to buy or to sell practices because we do not conceive that Dr. Jay is likely to prove a useful intermediary. Dr. Jay is now approaching our advertisers through a firm of agents and we recommend those of our readers who receive communications from him not to reply.

CYCLE SADDLES.

To the Editors of THE LANCET.

SIRS,—As a cyclist I have had trouble from perineal pressure and am anxious to find a saddle which will remove any difficulty and be a comfort in riding. Perhaps some of your readers who have suffered similarly can give me particulars of such a saddle and mention the tilt at which it should be placed to secure the best result. If they would do this they would confer a great favour on Yours faithfully,

June 15th, 1907. ALGEBRA.

THE ENGLISH EQUIVALENTS OF CUILLERÉE.

THE exact English equivalent of the French word "cuillerée" is often difficult to determine in reading French medical literature or on a continental journey. Cuillerée, a spoonful, is an ambiguous word, and frequently it is used without qualification. In the new Belgian Pharmacopœia it is stated that the term "cuillerée," standing alone, refers to the cuillerée à soupe or à bouche, the equivalent of the English tablespoon, and holding about 15 grammes of water. The cuillerée à café has a capacity of about four grammes of water and corresponds to the English teaspoon. The cuillerée à dessert is the English dessert-spoon and holds approximately 10 grammes of water.

THE SANITARY INSPECTORS' EXAMINATION BOARD.

THE following are the successful candidates in the examination for sanitary inspectors under the Public Health (London) Act, 1891, held in May, 1907:—Miss Clare Ballantyne (National Health Society), Miss Mabel Bhose (Royal Sanitary Institute), Mr. S. Bowers (King's College), Miss E. J. Charlesworth (National Health Society), Mr. A. E. Clutterbuck (Royal Sanitary Institute), Mr. E. S. Crook (Royal Sanitary Institute), Mr. J. Crowther (Royal Sanitary Institute), Miss Mary Davies (Royal Sanitary Institute), Miss D. Ebbetts (National Health Society), Mr. H. Hunkin (Royal Sanitary Institute), Mr. F. H. W. Large (in office), Miss M. Lowe (Royal Sanitary Institute), Mr. Duncan J. Menzies (King's College), Miss H. C. E. D. Ogston (National Health Society), Mr. A. Parsons (King's College), Miss C. J. Ryan (National Health Society), Mr. F. Savage (Royal Sanitary Institute), Mr. F. Seckerson (Royal Sanitary Institute), and Mr. C. H. Taylor (in office).

R. H.—1. Authorities on infant-feeding are almost universally agreed that cow's milk appropriately modified is greatly superior to the commercially prepared infant-foods. It is only necessary in cases in which there is any difficulty in digesting fat to remove any of the cream from the milk previously to dilution. In other cases the milk should be diluted according to the age of the infant and a small quantity of cream and sugar-of-milk added. 2. The Soxhlet sterilising apparatus can be used conveniently for pasteurising. In the latter operation the temperature of the milk must be maintained at about 80° C. for 40 minutes. This can be done by a proper adjustment of the flame with the lid of the steriliser partly open. For accuracy a thermometer should be used. 3. A useful small book upon infant-feeding and rearing is one entitled "The Physiological Feeding of Infants," by G. Eric C. Pritchard, M.D. Oxon. (London: The Scientific Press. 1900. Price 1s.). If our correspondent wishes for larger works on the question he will find much material dealing with the subject in the works on "Pediatrics," by T. M. Rotch, M.D. (London and Philadelphia: J. B. Lippincott Company. Price 25s.); and "The Diseases of Infancy and Childhood," by L. E. Holt, M.D. (London: Sidney Appleton. Price 25s.)

Mr. C. E. Richmond.—The General Medical Council is empowered to remove a practitioner's name from the Medical Register for matters connected with his address, by Section XIV. of the Medical Act of 1858.

ERRATUM.—In "Notes upon Health Resorts," at page 1668 of our last issue, the line "[FROM A SPECIAL CORRESPONDENT]." instead of following the general title, should have been inserted after the line "THE AUSTRIAN SPAS."

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 20th, 1907.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
June 14	30·00	S.W.	0·03	97	67	52	54	55	Cloudy
,, 15	29·96	S.W.	0·03	71	59	55	56	59	Raining
,, 16	30·10	W.	0·19	120	65	49	50	56	Cloudy
,, 17	30·17	W.	...	122	67	49	51	57	Fine
,, 18	29·99	S.W.	...	103	63	53	52	59	Fine
,, 19	30·01	W.	0·01	119	66	51	53	60	Cloudy
,, 20	29·91	WSW	...	121	66	53	54	56	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (3 P.M.), St. Mark's (2.30 P.M.).

TUESDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.), Tottenham (2.30 P.M.).

WEDNESDAY (26th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.).

THURSDAY (27th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.), Tottenham (Gynæcological, 2.30 P.M.).

FRIDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.).

SATURDAY (29th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (24th).—ROYAL SOCIETY OF MEDICINE (MEDICAL AND SURGICAL SECTIONS) (20, Hanover-square, W.)—5.30 P.M.: General Meeting. Election of Officers and Council and Transaction of other necessary Business.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover-square, W.).—7 P.M.: Council Meeting. 8 P.M.: Annual General Meeting. Casual Communication:—Mr. M. F. Hopson: An Inverted Mandibular Third Molar. Valedictory Address:—The President. Resolutions will be submitted formally dissolving the Society and transferring all matters connected therewith to the Royal Society of Medicine.

WEDNESDAY (26th).—SOCIETY OF TROPICAL MEDICINE AND HYGIENE (20, Hanover square, W.).—8.30 P.M.: Address: The President (Sir Patrick Manson). Lantern Demonstration:—Dr. Daniels.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (24th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.).—12 noon: Pathological Demonstration:—Dr. Low. 2 P.M.: Medical and Surgical Clinics. X Rays. Mr. Dunn: Diseases of the Eye. 2.30 P.M.: Operations. 5 P.M.: Clinical Lecture:—Mr. Paget.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. H. G. Adamson: Clinique. (Skin.) 5.15 P.M.: Lecture:—Mr. J. Cunning: Malignant Disease of the Cæcum and Colon.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Prince of Wales's General Hospital, Tottenham, N.).—Cliniques:—9.30 A.M.: Surgical Out-patient (Mr. H. Evans). 2.30 P.M.: Medical Out-patient (Dr. Whipham); Throat, Nose, and Ear (Mr. Carson); X Ray (Dr. Pirie).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.15 P.M.: Sir Dyce Duckworth: Medicine. 2.30 P.M.: Operations. 3.15 P.M.: Mr. W. Turner: Surgery. 4 P.M.: Dr. St Clair Thomson: Diseases of the Throat, Nose, and Ear. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat. 2.15 P.M.: Special Lecture:—Sir Dyce Duckworth: Treatment of Rheumatic Fever.

TUESDAY (25th).—ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East).—5 P.M.: Croonian Lecture:—Dr. W. J. R. Simpson: Plague.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Moullin: Gynæcological Operations. 2 P.M.: Medical and Surgical Clinics. X Rays. Dr. Ball: Diseases of the Throat, Nose, and Ear. 2.30 P.M.: Operations. Dr. Abraham: Diseases of the Skin. 5 P.M.: Lecture:—Dr. S. Taylor: The Graver Forms of Valvular Diseases of the Heart.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. W. Harris: Clinique. (Medical.) 5.15 P.M.: Lecture:—Dr. T. G. Stevens: Endometritis.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Prince of Wales's General Hospital, Tottenham, N.).—Cliniques:—10.30 A.M.: Medical Out-patient (Dr. Auld). 2.30 P.M.: Gynæcological Out-patient (Dr. Giles), Surgical Out-patient (Mr. Edmunds). Surgical Operations (Mr. Carson). 4.30 P.M.: Special Demonstration of Surgical Cases (Mr. H. Evans).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.15 P.M.: Dr. R. T. Hewlett: Medicine. 2.30 P.M.: Operations. 3.15 P.M.: Mr. Carless: Surgery. 4 P.M.: Mr. M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin. 3.15 P.M.: Special Lecture:—Mr. Carless: Cancer of the Stomach.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—3.45 P.M.: Demonstration:—Dr. Abercrombie: Nose and Accessory Sinuses.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Clinical Lecture:—Dr. E. Russell: Syphilis of the Nervous System.

WEDNESDAY (26th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. Dr. Saunders: Diseases of Children. 2 P.M.: Medical and Surgical Clinics. X Rays. 2.30 P.M.: Operations. Dr. Robinson: Diseases of Women. 5 P.M.: Lecture:—Dr. Robinson: On Gynæcology.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. T. F. Legg: Clinique. (Surgical.) 5.15 P.M.: Lecture:—Mr. A. H. Tubby: Surgical Diseases of Children.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Prince of Wales's General Hospital, Tottenham, N.).—Cliniques:—2.30 P.M.: Skin (Dr. Meachen), Eye (Mr. Brooks), Medical Out-patient (Dr. Whipham).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.15 P.M.: Dr. F. Taylor: Medicine. 2.30 P.M.: Operations. 3.30 P.M.: Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

THURSDAY (27th).—ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East).—5 P.M.: Croonian Lecture:—Dr. W. J. R. Simpson: Plague.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. X Rays. Mr. Dunn: Diseases of the Eye. 2.30 P.M.: Operations. 5 P.M.: Clinical Lecture:—Mr. Edwards.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M.: Lecture:—Mr. J. Berry: The Treatment of Hip Disease.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Prince of Wales's General Hospital, Tottenham, N.).—2.30 P.M.: Gynæcological Operations (Dr. Giles). Cliniques:—Medical Out-patient (Dr. Whiting), Surgical Out-patient (Mr. Carson). 3 P.M.: Medical In-patient (Dr. Chappel). 4.30 P.M.: Special Demonstration of Medical Cases (Dr. Auld).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. G. Rankin: Medicine. 3.15 P.M.: Sir W. Bennett: Surgery. 4 P.M.: Mr. M. Davidson: Radiography. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat.

CHARING CROSS HOSPITAL.—4 P.M.: Dr. Forsyth: Demonstration (Medical). (Post-Graduate Course.)

HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Lecture:—Dr. Garrod: Diabetes in Children.

FRIDAY (28th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Moullin: Gynæcological Operations. 2 P.M.: Medical and Surgical Clinics. Dr. Ball: Diseases of the Throat, Nose, and Ear. X Rays. 2.30 P.M.: Operations. Dr. Abraham: Diseases of the Skin. 5 P.M.: Lecture:—Dr. Low: Bilharzial Disease.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. D. Grant: Clinique. (Ear.)

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Prince of Wales's General Hospital, Tottenham, N.).—9.30 A.M.: Clinique:—Surgical Out-patient (Mr. H. Evans). 2.30 P.M.: Surgical Operations (Mr. Edmunds). Cliniques:—Medical Out-patient (Dr. Auld), Eye (Mr. Brooks). 3 P.M.: Medical In-patient (Dr. Leslie).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.15 P.M.: Dr. R. Bradford: Medicine. 2.30 P.M.: Operations. 3.15 P.M.: Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Clinical Lecture:—Dr. F. Buzzard: Acute Poliomyelitis.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—3.45 P.M.: Demonstration: Dr. Abercrombie: Nose and Accessory Sinuses.

SATURDAY (29th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. 2 P.M.: Medical and Surgical Clinics. X Rays. 2.30 P.M.: Operations. Dr. Robinson: Diseases of Women.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich.)—2.30 P.M.: Operations. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

During the week marked copies of the following newspapers have been received:—*Whitby Gazette, Burnley Gazette, Liverpool Daily Post, Sidmouth Herald, Warrington Guardian, Alloa Advertiser, Gravesend and Dartford Reporter, Dumfries and Galloway Courier and Herald, Birkenhead and Cheshire Advertiser, The Blackburn Times, Buxton Herald, Morning Leader, Belfast News Letter, Standard, Daily Telegraph, Daily Graphic, Daily Chronicle, Tribune, &c.*

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